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NURSEYMEN



NEWARK

NEW YORK STATE



EMMONS AND COMPANY

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All goods packed under cover.
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devoted to growing a complete
assortment of Nursery Stock

OFFICE AND PACKING PLANT

Newark, New York State

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Introductory

I n A p p r e c i a t i o n

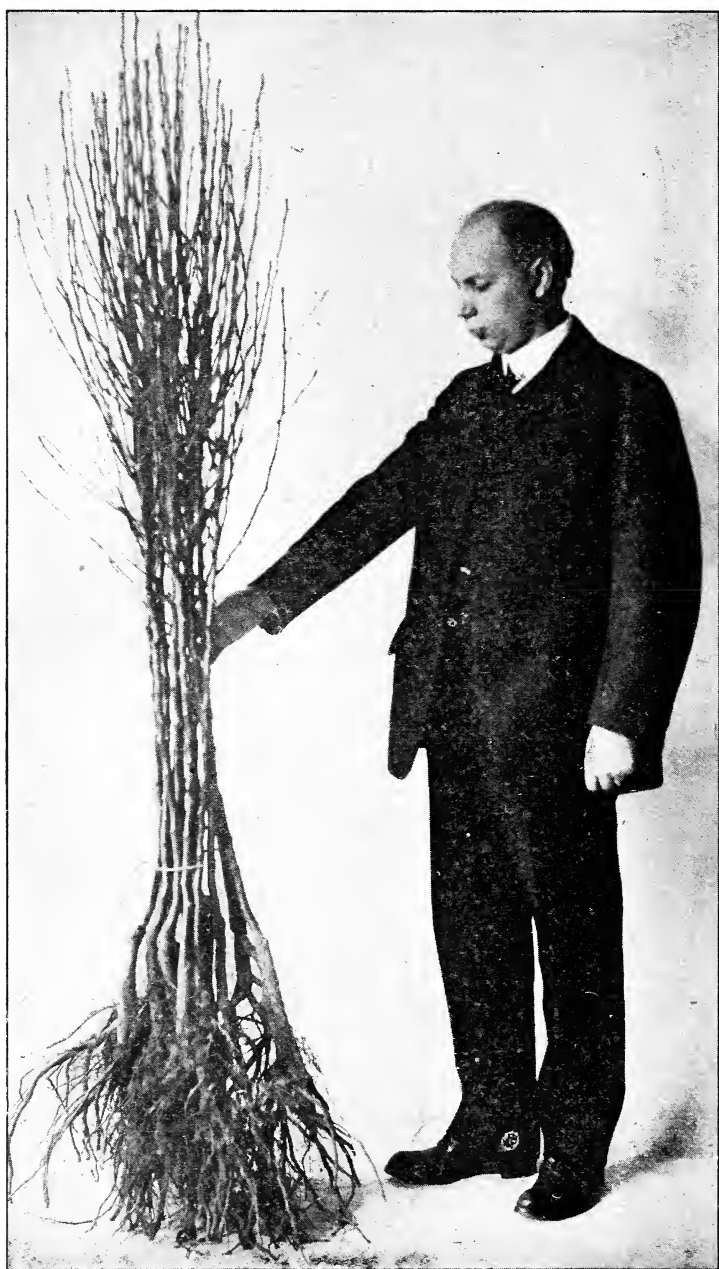
IT is with great pleasure that we present herewith a new edition of our general catalog, and in so doing, we wish to thank our customers for their very liberal patronage and only hope that we may have a continuance of same in the future.

We aim to list in our catalog only varieties of stock which are adapted to this locality and have carefully made a study of same, so that we may at all times be able to give you high-class stock that will grow. We stand ready at all times to replace any nursery stock that fails to live, free of charge.

We again wish to thank you for your past business and respectfully solicit a continuation of same in the future. Yours very truly,

E m m o n s & C o m p a n y

Newark, New York State



Unequalled in Quality—Beautiful Tops—Abundant Root Growth



Fruit Department

Apples

THE varieties described below are the best known in cultivation, their value having been well proved by thorough tests. The list comprises our principal stock of apples. Our nurseries are in the very best tree-growing section to be found, where the good constitution and great hardiness of wood in the young tree is attained by a much slower growth than the **rushing overgrowth** of some portions of our country.

In our Price List we present a list specially selected for the extreme hardiness of the tree and the excellence of the fruit—varieties that can be depended upon to produce fruit of fine quality, in abundance, in the cold sections.

RIPENING—The season of the year when the fruit is fully ripe and at its best to use, is indicated by the letter S for summer season, A for autumn season, W for winter season, together with the particular months of that season. This is the time of maturity in the western part of New York State; will vary north and south.

Alexander. A—October to December. Extra hardy. Sour. Red, striped. Fruit large, streaked with bright red on greenish yellow. Flesh yellowish white, rather crisp, sub-acid. A coarse sort, suitable for cooking. A moderate bearer only. Suited to the extreme north.

Arkansas. W—January to April. Sour. Red, striped. Fruit medium size, slightly conical, regular, smooth. Color glossy yellow, generally covered with deep crimson. Flesh yellowish, fine grained, firm, juicy, sub-acid. Quality rich, very good. Tree a good bearer. A commanding market apple. Origin, Arkansas.

Baldwin. W—November to March. Sour. Red, striped. Fruit rather large, shaded and striped with yellowish red and crimson on yellow ground. Flesh yellowish white, with rich sub-acid flavor. Tree very vigorous and productive. Very popular in most of the northern states, and more extensively grown than any other variety.

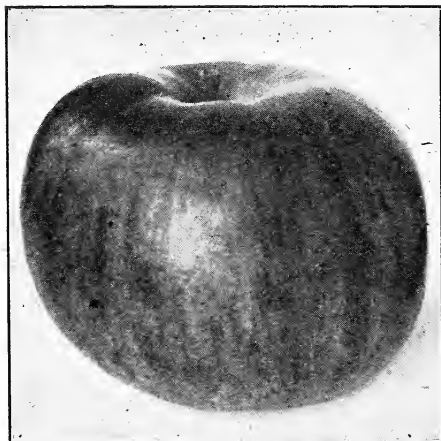
Baxter. W—November to March. Extra hardy. Sour. Red, not striped. Fruit

above medium size. Color dark red, spotted. Mild sub-acid; quality good. Originated in Canada, on the banks of the St. Lawrence.

Bellflower. W—December to February. Sour. Yellow, not striped. Fruit large. Skin yellow, with a tinge of red on the sunny side. Flesh tender, juicy, crisp, with a sprightly sub-acid flavor, and when not fully ripe quite acid. An excellent winter apple, and is highly esteemed as a market fruit. Tree hardy and a vigorous grower, succeeding well on light, sandy soils.

Ben Davis (New York Pippin.) W—December to March. Sour. Red, striped. Fruit large, roundish, sometimes conical, smooth. Skin striped red on yellow. Flesh white, tender, juicy, with a mild, good but not rich sub-acid flavor. A very popular apple in parts of the West and Southwest, and is much planted for market, as it commands a high price and is profitable because of its young bearing qualities. Keeps till midwinter or later.

Bismarck. W—October to January. Red, striped. Fruit good size, good quality. Tree begins to bear when quite young, and is a prolific bearer. Excellent for cooking. Origin, New Zealand.



McIntosh.

Boiken. W—Keeps well till May. Sour. Red, not striped. One of the hardiest and healthiest varieties of apple grown. It developed fine, large, well-developed specimens of fruit on trees in the nursery row one year from bud. Fruit medium size, roundish. Color bright yellow, with rosy red cheeks, resembling Maiden's Blush. Flesh white. It is said to be scab-proof, requiring no spraying to produce fine fruit, and the foliage is said to be so healthy as to withstand the attacks of fungi. The trees have not been attacked with fungus in the nursery row, and have needed no spraying. Origin, Russia.

Duchess of Oldenburg. A—September. Extra hardy. Sour. Red, striped. Fruit large, roundish, a little flattened at ends. Skin streaked with red and yellow. Flesh yellowish white, juicy, sub-acid. Ripens early in the fall. Fruit fair and handsome. Tree a vigorous grower, having fine, large foliage, bears abundantly, and when very young. Of Russian origin, and as hardy as any known variety.

Delicious. One of the best of the good sorts, large, somewhat conical, color a brilliant red, shading to golden yellow at the tip, flesh white, sweet and slightly acid, very fragrant, fine grained and crisp. A good keeper. Tree is strong, vigorous and very productive; a high-grade commercial apple.

Early Harvest. S—July and August. Sour. Yellow, not striped. Fruit medium size, roundish. Skin very smooth, with a few faint dots, bright straw color when fully ripe. Flesh very white, tender and juicy, crisp, rather acid flavor. Productive; long season. Needs rich cultivation to be fine. Good through Northern states. Is named Sour Bough by some.

Fallwater. W—November to January. Sour. Green, not striped. Fruit rather large, globular. Color yellowish green, dull red cheek, with a few large, whitish dots. Flesh juicy, white, rather fine-grained, crisp, pleasant, sub-acid flavor. Tree a strong grower, very productive, even while young. Also known as Tulpachocken.

Fall Pippin. A—October to December. Sour. Greenish yellow, not striped. Fruit large, roundish oblong. Skin greenish, becoming a high, rich yellow when ripe. Flesh yellowish, rather firm, becoming tender, and with a rich aromatic flavor. Tree a good grower and moderate bearer. Excellent for cooking. A fine fruit, and succeeds in nearly all sections.

Fameuse or Snow. A—October to January. Sour. Red, striped. Fruit medium size, roundish, somewhat flattened. Color, whitish ground, handsomely striped and blotched with fine deep red, and where much exposed to sun, a deep, nearly uniform red. A very celebrated Canadian fruit, remarkable for the snow-white color of its flesh. Is very tender, crisp and juicy, a little spicy, with a slight perfume. Valuable in Canada and the Northern states. Is named Snow Apple by some.

Gano. W—February to May. Sour. Red, not striped. Fruit of conical form, good size and smooth. Color deep red, shaded on sunny side to mahogany; very attractive. Flesh pale yellow, fine grained, tender, pleasant, mild, sub-acid. A good shipper and keeper. Tree healthy, vigorous and hardy. Annual and prolific bearer. Origin, Missouri.

Gilliflower. W—January to April. Sour. Red, striped. Fruit rather large, oblong ovate or long conical. Surface dark, dull, reddish purple, inclining to greenish yellow where densely shaded. Flesh greenish white, with a rich, good, slightly sub-acid flavor. Flesh becomes dry when fully ripe. Keeps through winter and late into spring. A good baking apple.

Golden Russet. W—November to April. Sour. Yellow, not striped. Medium size.

roundish, usually a little oblong, sometimes slightly flattened. Surface sometimes wholly a thick russet, and at others a thin, broken russet on a greenish yellow skin. Flesh whitish yellow, fine grained, rather compact, sprightly, mild sub-acid; good to very good. A thrifty grower and excellent bearer. A most hardy and valuable variety. Succeeds in most all sections, and especially in rich Western soils.

Gravenstein. A—September and October. Sour. Greenish yellow, striped. Fruit large, roundish. Skin a little waxy, striped and splashed with bright red on yellow ground. Flesh tender, juicy and crisp. Tree vigorous and productive, bearing regular crops of finely shaped handsome fruit. Fine in all localities. German origin.

Grimes' Golden. W—December to February. Extra hardy. Sour. Yellow, not striped. Fruit is above medium size, round or slightly oblong. Skin rich golden yellow, sprinkled with large russet dots. Flesh yellowish white, crisp, tender, rich and juicy, with a mild sub-acid flavor. Tree hardy, vigorous and productive. It succeeds over a large extent of country, and endures severe cold without injury.

Greening. W—See Rhode Island Greening and Northwestern Greening.

Hubbardston Nonesuch. W—November and December. Sour. Red-yellow, striped. Fruit large. Color, small broken stripes and numerous dots of light, rich red on a rich yellow ground. Flesh yellowish, very rich, slightly sub-acid, with a strong mixture of a rich, sweet flavor; the finest quality and very valuable. A famous New England sort—fine at the North and Northwest. A native of Massachusetts.

Jonathan. W—November until March. Sour. Red striped. A beautiful dessert apple. Fruit of medium size, regularly formed, roundish and slightly conical. Skin clear and smooth, the ground color being clear, light yellow, nearly covered by lively red stripes, deepening into brilliant or dark red in the sun. Flesh white, sometimes a little pinkish, very tender and juicy, with a mild, sprightly flavor. Hardy, productive, moderately vigorous. Fruit is one of the best in quality, and profitable for table or for market. Originated, Kingston, N. Y.

King (King of Tompkins County.) W—November to March. Sour. Red, striped. Fruit large to very large, roundish. Color

a deep red in stripes, making a handsome appearance. Flesh tender, juicy, rich, highly flavored. Commands a high price in market. Tree a strong grower; bears abundantly. Inclined to drop its fruit rather early, and should be gathered soon. Succeeds east and west, at the north, but not so well in the far south.

Maiden's Blush. A—August to October. Sour. Yellow, not striped. Fruit rather large, oblate, smooth and regular, with a fine, evenly shaded, red cheek or blush on a clear, pale yellow ground. Flesh white, fine grained, tender, pleasant sub-acid, but not rich. Tree spreading. Although deficient in richness, it is valued for its fair, tender, beautiful fruit and uniform productiveness. Valuable in the West.

McIntosh Red. W—November to February. Extra hardy. Sour. Red, not striped. An exceedingly valuable, hardy Canada sort. Fruit medium size, roundish, nearly covered with rich red on light yellow skin. Flesh white, fine, very tender, juicy, and refreshing, with a peculiar, quince-like flavor. A good bearer of fair, handsome fruit. Resembles the Fameuse, but larger, more hardy, and fully equal in quality.

Newtown Pippin. W—December to May. Sour. Yellowish green, not striped. Fruit medium size or rather large, roundish oblique. Skin dull green, often with a dull brownish blush. Flesh is greenish

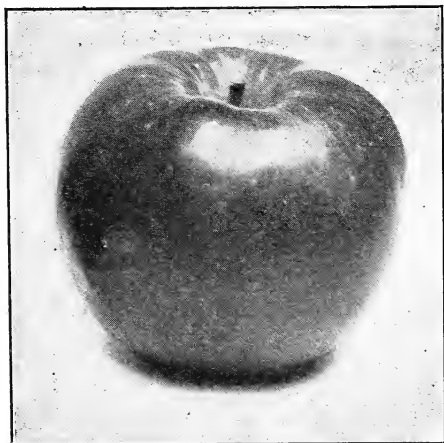


Jonathan.

white, juicy, crisp, fine grained with high, fine flavor. Keeps through spring, and retains its freshness remarkably. The fruit is very liable to black spots or scabs,

unless under high, rich and constant cultivation. One of the best fruits for foreign markets. Rarely succeeds well in New England. Tender far west. Native of Long Island, N. Y.

Northern Spy. W—January to June. Sour. Red, striped. Fruit large, roundish, some-



Northern Spy.

what conical in shape. Skin handsomely striped and covered with crimson on the sunny side, overspread with a thin bloom. Flesh juicy, flavor rich, aromatic, mild sub-acid, fine. Keeps through winter and late into spring; preserves its flavor remarkably fresh. Succeeds in the north and northwest; less valuable farther south. A native of East Bloomfield, N. Y.

Northwestern Greening. W—January to Spring. Extra hardy. Sour. Greenish yellow, not striped. This Wisconsin seedling apple, which received the first prize of the Wisconsin State Horticultural Society over a large competition as a seedling apple, has been thoroughly tested in most trying places in Wisconsin, and proves to be equal to the Wealthy in every respect as a tree, and has the added merit of being a late keeper. Fruit medium to large, round ovate to conical, smooth. Skin greenish yellow. Flesh fine grained, firm, juicy, sub-acid, good. Valuable for the north. Origin, Wisconsin.

Pewaukee. W—December to March. Extra hardy. Sour. Red, striped. Fruit medium to large, round. Color, striped with red, on a bright yellow skin. Flesh yellowish white, juicy, sub-acid; in qual-

ity something like Jonathan. Adapted to the extreme north, and equally as valuable for southern culture. A seedling from the Duchess of Oldenburg.

Pound Sweet. A—October to December. Sweet. Greenish, not striped. Fruit very large, round. Skin pale green. Excellent for baking and culinary purposes. Flesh white, sweet, tender, not juicy. Moderate quality. Tree a free grower and productive. Also called Pumpkin Sweet.

Quebec Winter Sweet. W—December to March. Extra hardy. Sweet. Yellow, not striped. About the size of the Tallman Sweet. Color yellow, with red cheeks. Splendid quality, and very hardy. Originated in the Province of Quebec, Canada.

Rambo. A—October to December. Sour. Yellow, striped. Fruit medium size, round, flat and smooth. Skin streaked and marbled with dull, yellowish red on pale yellowish ground. Flesh greenish white, very tender, rich, mild sub-acid. Of very good quality. Fine in nearly all localities.

Red Astrachan. S—Last of July to middle of August. Sour. Red, not striped. Fruit large, roundish. Skin nearly covered with crimson, and with an exquisite bloom on the surface of the fruit, like that of the plum; an apple of extraordinary beauty. Flesh quite white, crisp, moderately juicy, with an agreeable, rich, rather acid flavor, and first-rate quality. Ripens very early; suitable for table and kitchen. Tree a vigorous grower and a good and regular bearer.

Rhode Island Greening. W—November to March. Sour. Green, not striped. Fruit large, roundish, often a little flattened. Color green, becoming greenish yellow; always fair. Flesh yellow—a rich yellow if exposed much to the sun, and whitish yellow or greenish white if much shaded—tender, juicy, with a rich, rather acid flavor. Tender far west. Succeeding well in all northern sections and on a great variety of soils. A crooked growing tree in the nursery.

Rome Beauty. W—November to February. Sour. Red, striped. Fruit large, roundish, very slightly conical. Skin mostly covered with bright red on pale

yellow ground. Flesh tender, not fine-grained, juicy, of good quality. Ripens early in winter. The large size and beautiful appearance of this new Ohio apple render it popular as an orchard variety.

Roxbury Russet. W—January to June. Sour. Yellow. Russet, not striped. Fruit medium to large, roundish, sometimes a little flat. Skin partly or wholly covered with rather rough russet on greenish yellow ground, sometimes a dull brown cheek. Flesh greenish white, rather granular, slightly crisp, with a good sub-acid flavor. Keeps late in spring, commanding then a good price. It succeeds well throughout the northern states, but partially fails in a few localities in the West.

Sops of Wine. S—August to September. Sour. Red, striped. Fruit medium size. Skin dark red. Flesh white, often stained, moderately juicy, sub-acid, of good flavor. An abundant bearer. Valuable for its free growth and fair fruit.

Sour Bough. S—See Early Harvest.

Snow. A—See Fameuse.

Spitzenburg (Esopus.) W—December to March. Sour. Red, striped. Fruit medium size, slightly conical. Surface a high, rich red, rather obscurely striped. Flesh yellow, firm, crisp, spicy, rather acid, and unequaled in its high rich flavor. Keeps through winter. Usually a moderate bearer. Succeeds best in New York, its native state.

Stark. W—January to May. Sour. Red, striped. Tree a vigorous grower. Fruit large, roundish. Skin greenish yellow, shaded and striped with light and dark red nearly over the entire surface, and thickly sprinkled with light brown dots. Flesh yellowish, coarse, moderately juicy, mild sub-acid. Valuable as a keeper. Origin, Ohio.

Stayman's Winesap. W—December to April. Sour. Red, striped. Fruit of medium size, round, slightly conical. Skin lively deep red. Flesh yellowish, firm, crisp, with a rich, rather sub-acid flavor. A good, long keeper.

Sutton Beauty. W—December and January. Sour. Yellow, striped. Fruit large, roundish. Skin waxen yellow, striped

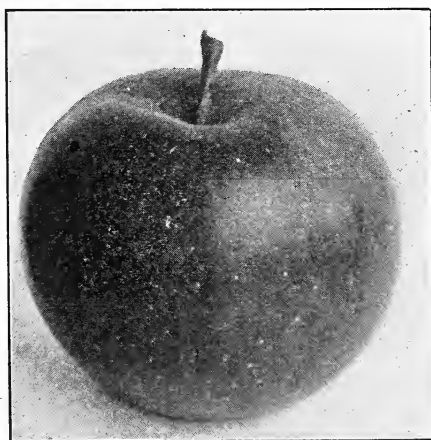
with crimson. Flesh tender, sub-acid. Good tree; a free grower and productive. A valuable new apple, that is proving as profitable as the Baldwin for orchard purposes. Origin, Worcester, Mass.

Sweet Bough. S—Middle July to August 10. Sweet. Yellow, not striped. Fruit large size, pale greenish yellow. Flesh white, very tender and crisp when fully ripe, with a rich, sweet flavor. Tree moderately vigorous; moderate bearer. Desirable as an eating apple.

Talman Sweet. W—November to March. Sweet. Yellow, not striped. Fruit medium size or rather large, round, slightly conical. Color clear, light yellow, with a clear, brownish, distinct line running from stalk to apex. Flesh quite white, rather firm, fine grained, with a rich, sweet flavor.

Tulpahocken. W—See Fallawater.

Twenty-Ounce. A—October to December. Sour. Red and yellowish green, striped. Fruit very large. Surface sometimes smooth, often very wavy. Color, striped rich yellowish red on greenish yellow background. Flesh coarse grained, sprightly, brisk, sub-acid. Very showy, fair and productive. A profitable market apple. Origin, Western New York.



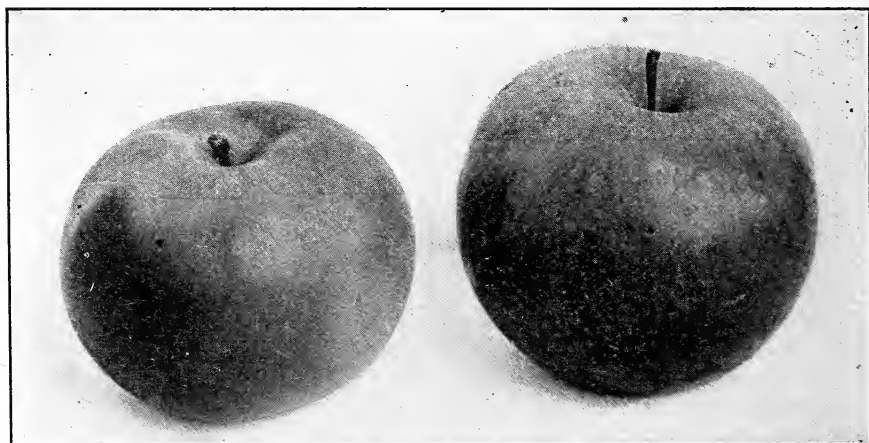
Rome Beauty.

Wagner. W—December to March. Sour. Red, striped. Fruit medium size, roundish oblate. Skin shaded and indistinctly

striped with pale red and a full deep red in the sun on a warm yellow ground; often streaked with russet. Flesh yellowish, fine grained, tender, compact, mild sub-acid, aromatic, excellent. Ripens through winter. Succeeds well at the west. Origin, Penn Yan, N. Y.

Wealthy. A—November to January. Extra hardy. Sour. Red, striped. Fruit medium size, roundish oblate, smooth. Color whitish yellow ground, shaded with dark, rich red, sometimes entirely covered with red. Flesh white, fine grained, sometimes stained with red; tender, juicy, lively sub-acid. Quality very good. Core small. Origin Minnesota.

Wolf River. W—January to February. Extra hardy. Sour. Red, striped. One of our hardy varieties that may, without doubt, be classed as an "ironclad." Tree a strong grower, great bearer and perfectly hardy. Fruit large, conical. Color yellowish white, splashed with bright red; dots large, scattering, light gray. Flesh yellowish white, coarse, tender, dry when ripe, sub-acid, not rich, medium quality only. Valuable in the northwest. Originated near Wolf River, Wisconsin.



Maiden's Blush.

Wealthy.

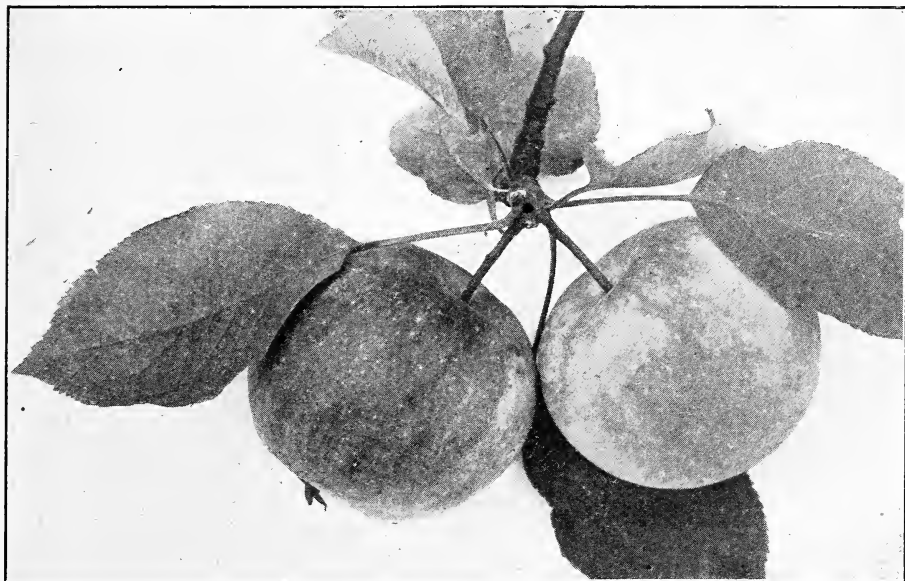
Winter Banana. W—Sour. Yellow and red. Prof. L. H. Bailey of Cornell University, writes in regard to this apple: "The quality of the Winter Banana is very excellent and it has a spicy flavor which I like very much. If the apple is productive and hardy, and has the quality which the specimen seems to indicate, it is certainly very valuable." Prof. L. R. Taft, of Michigan Agricultural College, writes: "While not very large, the Winter Banana is of good size, regular in form, beautiful and handsome in appearance. Unlike most other sorts of its color it seems to handle well, the specimen that I have, not showing any discoloration after being handled a number of times. In flavor it is a very mild sub-acid with a rich, aromatic odor and flavor. Consider it a very valuable apple for either home use or market."

Yellow Transparent. S—July and August. Sour. Extra hardy. Yellow, not striped. Russian variety, imported by the Department of Agriculture, Washington, D. C. Tree hardy, a strong grower, and an unusually young bearer. Fruit good size and good quality. Skin clear white at first, turning to a beautiful pale yellow when fully ripe. Flesh white, half fine, tender, juicy, sprightly sub-acid. Core medium.

York Imperial. W—November to February. Sour. Red, not striped. Fruit medium. Color whitish, shaded with crimson in the sun. Flesh firm, crisp, juicy, pleasant, mild sub-acid. Tree moderately vigorous and productive.

Crab Apples

THESE varieties are entirely hardy, and while they will endure the greatest degree of cold, they will also thrive equally well in the Middle or Southern States. Crab fruit is valuable for cider, preserves and canning, and some of the improved varieties are pleasant and rich for the dessert. Crab fruit is profitably grown for market.



Hyslop Crab.

★ **General Grant.** Extra hardy. Red, striped. October and November. Fruit large, round. Color yellow, covered with stripes of red, and when exposed to the sun turning quite dark. Flesh white, fine grained, mild sub-acid. Tree a good grower, hardy and productive. In season during late autumn.

Hyslop. Red, not striped. November. Fruit large, roundish ovate, and produced in clusters. Color dark, rich red covered with thick blue bloom. Flesh inclined to yellow, sub-acid. Tree very hardy and vigorous.

✓ **Martha.** Red and yellow, not striped. October and November. A new crab raised from the seed of the Duchess of Oldenburg by P. M. Gideon, of Minnesota. Mr. Gideon says: "A rapid, stiff grower, a perfect pyramid in form; a great bearer of the most beautiful fruit we ever grew; a bright, glossy yellow, shaded with light, bright red; a mild,

clear tart, surpassing all other crabs we ever grew for all culinary purposes, and fair to eat from hand." We regard it as very valuable.

Transcendent. Red-yellow, not striped. September to October. Fruit medium size to large, roundish oblong. Color golden yellow, with a rich, crimson-red cheek, covered with a delicate white bloom; at ripening, the red nearly covers the whole surface. Flesh yellow, crisp and, when fully ripe, pleasant and agreeable. In season early in autumn. Tree perfectly hardy and a young and abundant bearer.

Whitney. Red, striped. August. Fruit of medium size. Skin smooth, glossy green, striped and splashed with carmine. Flesh firm and juicy, and flavor very pleasant. A great bearer and very hardy, as well as a vigorous, handsome grower. Origin, Illinois.

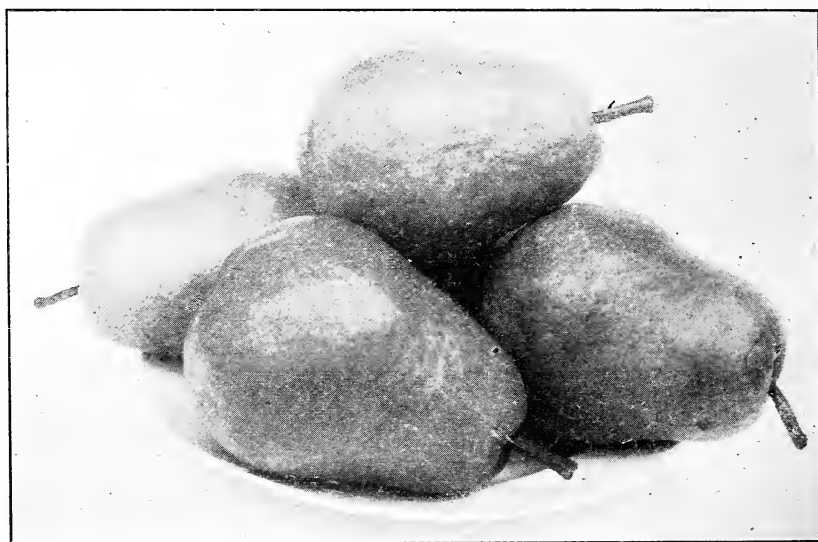
Pears

GATHERING Pears—Nearly all pears should be picked from the tree before maturity, and ripened in the house. **Summer Pears** should be picked at least a week or ten days before they are ripe. **Autumn Pears** two weeks before they are ripe. **Winter Pears** should be picked before there is any danger of frost.

When the tree bears abundantly, it is best to thin the fruit well when it is about one-third grown; the remaining specimens will be greatly improved.

Under a separate head, on page 14, will be found a list of varieties that thrive as Dwarf Pears; that is, they do well grown upon French quince stock for their roots.

RIPENING—The season of the year when the fruit is fully ripe and at its best to use, is indicated by the letter S for summer season, A for autumn season, W for winter season, together with the particular months of that season. This is the time of maturity in the western part of New York State; will vary north and south.



A Plate of Bartletts.

Standard Pears

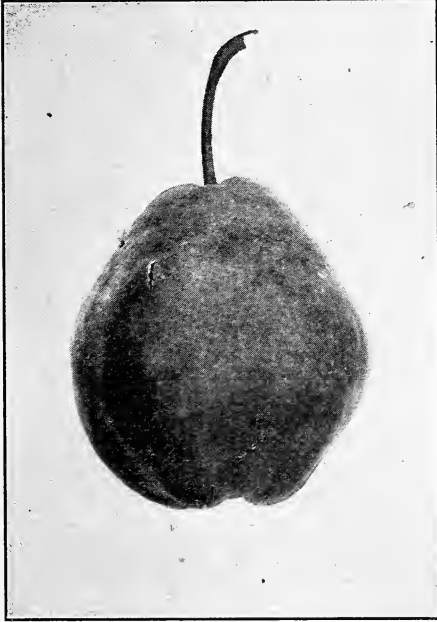
Bartlett. S—August and September. Fruit quite large, somewhat pyramidal in shape. Surface yellow, with a faint blush. Flesh nearly white, fine grained, tender and buttery with a nearly sweet, sometimes faintly sub-acid, rich flavor. Ripens end of summer and beginning of autumn, far north is strictly an autumn pear. The fruit, when not fully grown, ripens and becomes of good quality if kept in the house a week or two. Tree very productive, bears very young. Many fine qualities render it a general favorite. Succeeds over a large extent of territory.

Beurre d'Anjou. A—November to December. Hardy. A large, handsome pear. Surface greenish yellow, a dull red cheek

to the sun clouded with russet. Flesh yellowish white, fine grained, buttery, melting, with a high, rich, vinous, excellent flavor. Tree a good bearer. The hardiness, uniformity, reliability, excellence and long-keeping qualities render it one of the most valuable of all Pears. Begins to ripen in the middle of autumn, and keeps until the winter holidays, when it commands a very high price in market.

Clapp's Favorite. S—Late August to early September. Extra hardy. Supposed to be a cross between Bartlett and Flemish Beauty. Fruit of large size, tapering to the crown, neck rather small. Skin smooth, yellowish green, becoming yellow, dotted and shaded with red to the sun. Flesh greenish or yellowish white, juicy, melting, perfumed, of very good quality. Ripens

the end of August and early September, or about a week before Bartlett. Fruit uniform size and evenly distributed over the tree. Equally hardy with Flemish Beauty, also a good grower and productive. Pick the fruit at least ten days



Kieffer.

before it would ripen upon the tree. Origin, Dorchester, Mass.

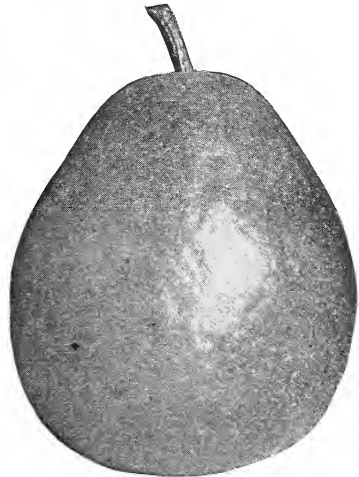
Duchess d'Angouleme. A—October and November. Should only be sold as a dwarf. Fruit very large. A rough and uneven surface. Color a greenish yellow, with patches of russet and a dull red cheek. Flesh yellowish white, melting, buttery, juicy. A vigorous and strong grower, and a good bearer while quite strong. Valuable for orchard. It attains its greatest perfection on the quince root, or as a dwarf tree.

Flemish Beauty. A—September and October. Extra hardy. Fruit large; shape varies. Surface slightly rough, with some reddish brown russet on pale yellow ground. Flesh juicy, melting, often with a rich, sweet and excellent flavor, but variable, and sometimes not high-flavored; needs house ripening. An old and highly esteemed variety; a strong grower and great bearer. Hardy and desirable. This variety ranks for hardiness among pears as the Duchess of Oldenburg does among apples—with the most hardy.

Kieffer. A—October and November. Raised from the seed of the Chinese Sand Pear, supposed to have been cross fertilized with some other kind grown near it. Tree remarkably vigorous, having large, dark green, glossy leaves, and is a young and very heavy bearer. The tree is inclined to overbear, and proper thinning will improve the quality of the fruit. Fruit large to very large, roundish oval, narrowing at both ends. Skin rich golden yellow, with a fine red blush on the sunny side. Flesh is whitish, a little coarse, juicy, very good. Ripens through October and November. To have it in perfection, it should be gathered when fully grown and ripened in the house. As a canning pear, it retains its light color and possesses a rich, vinous flavor, being very refreshing, and, notwithstanding the process of canning, it remains rich, juicy and sprightly.

Koonce. S—Season last of August. Fruit medium to large. Color golden yellow, red cheek; handsome. Flesh spicy, juicy, sweet, good quality. Season very early. Tree vigorous, free from blight. Origin, Illinois.

Lawrence. W—December. Fruit above medium size. Color lemon-yellow, numerous small dots. Flesh whitish, buttery, rich, very good flavor. A young and good bearer, and unexcelled as a valuable early winter sort. Ripens easily, and is of uniform excellence.

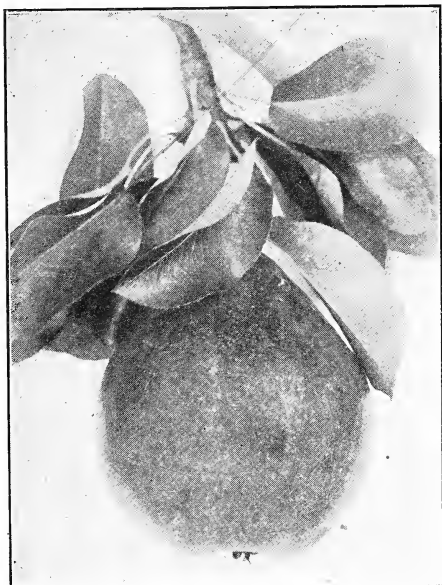


Seckel.

Seckel. A—September and October. Fruit small. Skin rich yellowish brown, with a deep brownish red cheek. Flesh very fine grained, sweet, very juicy, melting; one of the richest and highest flavored

Pears known. Very hardy, and remarkably free from blight. A prolific bearer. Origin, near Philadelphia, Pa.

Sheldon. A—October and November. A Pear of the very first quality. Fruit



Clapp's Favorite.

large, roundish. Color greenish russet. Flesh very melting, juicy. Tree vigorous, erect and handsome and bears well when grown on pear root (as a Stand-

ard). A fine grower and good bearer, of fine quality, but does not succeed grown on the quince root (as a Dwarf). Should be sold only as a Standard.

Vermont Beauty. W—October. Fruit of medium size. Color yellow, with bright carmine cheek. Flesh rich, juicy and sub-acid. The tree bears young, is of vigorous growth, and very productive. Originated in Grand Island County, one of the northernmost and coldest counties of the state of Vermont.

Wilder. S—One of the very earliest. Hardy, Produces a crop while young. Fruit large, pyriform, very highly colored, pale yellow, shaded dark russet red; small, numerous dots. Flesh pale yellow, fine grained, juicy; flavor above medium to very good. Good shipper and tree a very prolific bearer. Good for market. A report from the state of Vermont, where the mercury goes far below zero, is that the Wilder has come through their severe winters alive and bright to the tip.

Worden-Seckel. A—October to December. A seedling of the Seckel. Color golden yellow, one side bright crimson. Flesh dull white, very juicy, buttery, melting, fine-grained with a flavor and aroma fully equal to that of its distinguished parent, which it far surpasses in size, beauty and keeping qualities. Ripens early in October, and can be kept in good eating condition till December. Bears in clusters, and is one of the most beautiful and attractive, and at the same time one of the best flavored Pears on the market.

Dwarf Pear

THE PEAR, when budded upon the root of the quince, assumes a dwarf habit, and seldom grows above ten feet in height when properly trained.

In planting Dwarf Pear trees the stock on which they are budded, and no more, should be under ground. They will then stand firm, and not lose their dwarf character by the rooting of the standard stock. The side branches should not be removed higher than one foot from the ground on dwarfs. Train in pyramidal form.

See directions under Standard Pears for gathering and ripening Dwarf Pears.

The selection of varieties in the Dwarf sorts is of importance, and it is a well established fact that certain kinds do not thrive well on the quince root. Our list includes the varieties valuable as Dwarf trees.

SUMMER VARIETIES—Bartlett, Flemish Beauty, Clapp's Favorite.

AUTUMN VARIETIES—Beurre d'Anjou, Garber, Seckel, Duchess d'Angouleme, Kieffer, Vermont Beauty.

WINTER VARIETIES—Lawrence, Worden-Seckel.

The description of the fruit of the Dwarf Pear tree is identical with that of the fruit of the Standard Pear Tree.



Cherries

OF ALL the fruits, the Cherry is one of the tree fruits which serves a good purpose equally well in the dooryard, the fruit garden or commercial orchard. It is unequalled as an ornamental when in bloom, and its fruit is universally liked. The trees are of very easy culture, thriving well on almost any soil except that which is very wet, although doing its best in a well-drained loam. They are little subject to insects or disease, and require about the least pruning of any tree fruit.

Black Tartarian. Sweet, black. Early to middle of June. Fruit quite large (often an inch in diameter), heart-shaped, with an uneven surface. Skin bright black. Flesh dark, half tender, with an excellent liver-like consistency, rich, very little acid with a fine, mild flavor.

Dyehouse. Partakes of both the Duke and Morello in wood and fruit; a very early and sure bearer; ripens a week earlier than Early Richmond.

Early Richmond. Sour. Red. June. Fruit medium size, round, growing in pairs. Flesh very juicy and acid. Tree slender; not a rapid grower, but a great bearer. Ripens early, and hangs long on the tree.

English Morello. Sour. Dark red. Late July and early August. Fruit large. Color dark red, nearly black. Tender, juicy, sub-acid. Tree dwarf and slender.

Governor Wood. Sweet. Light. Middle of June. Fruit large, roundish, heart-shaped, light yellow, shaded and marbled with light red. Flesh rather tender, nearly sweet, rich, excellent. Tree vigorous, forming a round head. As the trees grow older they often over-bear, and yield a smaller and less excellent fruit;

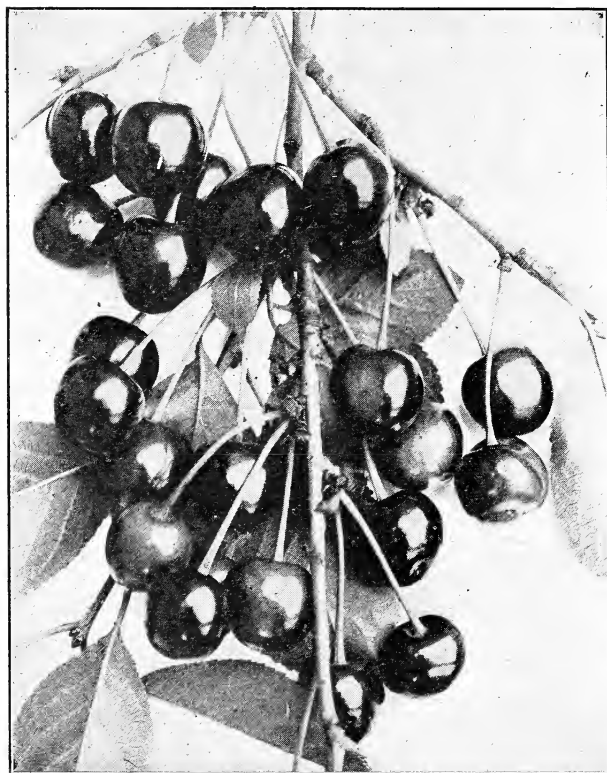
hence, require thinning. Origin, Cleveland, Ohio.

May Duke. Sour. Dark red. July. Fruit large, heart-shaped. Color red at first, becoming when mature nearly black. Flesh reddish, becoming dark purple, very juicy and melting, rich, acid, excellent. Usually early, but varies in its season of ripening, even on the same tree. Very hardy.

Montmorency Large. Sour. Red. Late June. One of the very finest acid Cherries. Tree very hardy and an immense bearer; commences to fruit while young, and is loaded annually thereafter with fine crops. Fruit of good size. Fine flavor. Color bright, clear red. Valuable everywhere, especially for northern latitudes. A good market variety. The Connecticut Valley Orchard Co., of New Britain, report through their Mr. J. B. Smith: "We have 50 trees (Large Montmorency Cherry) that came into bearing last season and greatly like the variety. Is large, of high color, late sour, and very productive. A fine tree, bearing its fruit not in clusters, but singly, and they grow so thick that they can be picked cheaper than any other Cherry we have."

Napoleon Bigarreau. Sweet, light. Early in July. Fruit of the largest size, regularly heart-shaped. Skin pale yellow and amber, spotted and shaded with deep red. Flesh very firm, with a fine flavor. Very productive and good for market.

Ostheim. (Russian Cherry.) Sour. Dark red. Early to middle of July. Imported



Montmorency Large.

from St. Petersburg, Russia. In the severest winters of Minnesota found to be hardy. Fruit large, roundish. Flesh liver color, tender, juicy, sub-acid, and when fully ripe nearly sweet.

Rockport. Sweet. Light. Late June and early July. Fruit quite large, round, heart-shaped. Color, when fully ripe, a beautiful clear red, shaded with pale amber. Flesh firm, juicy, sweet, rich, with an excellent flavor. Tree upright grower. Origin, Cleveland, Ohio.

Schmidt's Bigarreau. Sweet. Black. Mid-

dle of July. A most promising Cherry. Fruit of immense size. Color a rich, deep black; very desirable for the table. Flesh dark, tender, very juicy, with a fine flavor. Tree bears abundantly. A Utica, N. Y., fruit commission merchant writes us about fruit of Schmidt's Bigarreau Cherry:

"What about those nice dark cherries that you shipped me last season? Will you have any of them this season? If so, would like to have you send them along." 8 lb. baskets sold for 75c.

Stuart Bigarreau. Sweet. Light red. Late July. A new seedling Cherry, two or three weeks later than other varieties. Color a showy, light red. Fruit good size. Tree a vigorous grower and hardy, and extremely productive, making it very desirable for family use or market purposes. The original tree has fruited each season for the last twenty years. On our Stuart Bigarreau Cherry fruit a commission merchant wrote us:

"Would be pleased to receive some of those elegant Sweet Cherries you shipped me last season."

This man sold Stuart Bigarreau fruit for us, selling 8-lb. baskets at 75 cents per basket.

Windsor. Sweet. Dark. Late July. Fruit large. Color nearly black, or liver-colored. Flesh remarkably solid, sweet, and of a fine quality. A very valuable late winter variety for market and for family use. Tree hardy and very productive. A seedling originated in Windsor, Canada.

Yellow Spanish. Sweet. Light. End of June. Fruit large, often an inch in diameter. Pale waxen yellow, with a handsome, light red cheek to the sun. Flesh firm, juicy, rich and delicious. Tree vigorous and an excellent bearer. Succeeds over large extent of country.



Plums

A List of Thoroughly Tested American, European and Japanese Varieties.

THE BEST soil for these fruits usually is a strong, rich clay-loam, although some do well on rather dry, as well as light soils. Some varieties are so deficient in fertile pollen that they are almost incapable of fertilizing themselves. To overcome this, plant two or three varieties. The fruit is of greater excellence when the trees are regularly and systematically sprayed.

Abundance. Japanese. Orange-yellow and red. Early September or late August. Imported by Luther Burbank in 1884. Fruit medium size (or large when thinned), varying in shape from nearly spherical to distinct sharp-pointed, usually with a pointed apex. Ground color rich yellow, overlaid on sunny side with dots and splashes of red, or in some specimens nearly uniformly bluish-red on the exposed side. Flesh deep yellow, juicy and sweet, of good quality when ripe. Cling. This is one of the best known of all the Japanese Plums in the North, and its popularity is deserved. Is called True Sweet Botan by some.

Beauty of Naples. Light. Season September. Tree a good bearer. Color yellowish green, with reddish cheek on sun-exposed side. Flesh yellow-amber, tender, juicy, sweet, of excellent quality. Semi-cling. Fruit of medium to good size.

Bradshaw. Purple. Late August. Fruit very large, sometimes with a very slight neck. Color dark purple, with a light blue bloom. Flesh a little coarse, becoming light brownish purple, at first adhering, but becoming nearly free from the stone when fully ripe; juicy, good, slightly acid. Trees vigorous and productive.

Burbank. Japanese. Red. September and October. Imported by Luther Burbank in 1885. Of the Japanese sorts, this is one of the best. Fruit when fully grown is 6 to 7 inches in circumference, nearly globular, often a little lop-sided, point generally blunt. Color cherry red, showing many yellow dots; often more or less marbled, in the sun becoming rather dense red. Flesh firm and meaty, deep yellow, rich and sugary; its firmness makes it a good keeper and a good shipper, and it is excellent for canning. For market or family use it is very fine. Tree of great vigor, with a broad, sprawling habit, needing close pruning; is exceedingly productive, and as it usually sets too much fruit; it should be thinned for best results.

"Ripe Burbank Plums kept in good condition for thirty-six days after received. This speaks volumes for this excellent variety."—North American Horticulturist.

Chabot. Japanese. Yellow and red. September. Fruit of medium size, oblong conical. Color bright, cherry red nearly all over, with yellow dots, excepting the shady side, which remains yellow. Flesh orange yellow, firm, juicy, sweet and of excellent quality. A cling. Valuable for drying and canning. Its late



Imperial Gage.

season of ripening and its beauty give it high market value. Tree strong, upright, and very productive. This variety is called Yellow Japan; also Chase by some.

Fellenburg. French or Italian Prune. Dark, purple. Late August. An excellent late variety. Fruit medium size, oval, tapering at ends. Color dark purple, with dark blue bloom. Flesh greenish yellow, juicy, sweet, of good quality. Free-stone. Valuable for drying. Tree a free grower, and very productive. Named Italian Prune by some.

Forest Garden. Hardy. Dark. September. Well adapted for the north, being very hardy. Fruit is not large, nearly round. Color orange-yellow, overlaid and dotted with red, almost a purplish red, when fully ripe. Flesh orange color, moderately firm fibrous, juicy, good. Pit clings. Should only be planted in extremely cold sections. Origin, Illinois.

German Prune. Purple. September. Fruit large, long-oval, curved or swollen on one side, with a long, tapering neck. Skin purple, with a thick blue bloom. Flesh green, firm, sweet, pleasant, not

rich. Pit free. Valuable for drying, an industry that is increasing in importance. Much used for preserving also, so that the market demand is good, making a good price for the fruit.

Gueii. Dark. First to middle of September. Fruit very large, deep bluish purple, covered with thick bloom. Flesh yellowish green, sweet and pleasant. Tree a great and very young bearer, hardy and a strong, rapid grower; generally regarded as of great value for market by the plum growers along the Hudson River. Origin, Lansingburg, N. Y.

Imperial Gage. Green and yellow. Last of August. One of the most productive. Fruit rather large, oval. Surface green, slightly tinged yellow, with marbled green stripes. Flesh greenish, juicy, melting, rich, sometimes adhering, but usually free from the stone. A strong, vigorous grower, very productive.

Italian Prune. See Fellenburg.

Lombard. Violet-red. Last of August. Fruit medium size, round, oval, slightly flattened at ends. Skin violet-red. Flesh

Newark, New York State

deep yellow, juicy and pleasant; good quality. Tree a great bearer and hardy. Valuable most anywhere. This variety is sold very extensively. Origin, Albany, N. Y.

Moore's Arctic. Hardy. Dark. September and October. Fruit medium size or below. Skin purplish black, with a thin, blue bloom. Flesh greenish yellow, juicy, sweet and of pleasant flavor. Tree healthy, vigorous, an abundant and a young bearer. Origin, Maine. Mr. Charles Downing speaks of it as follows: "A new, hardy Plum, which originated on the highlands of Aroostook County, Me., where, unprotected and exposed to Arctic cold, it has for many years borne enormous crops, and is said to be the hardiest Plum known."

Reine Claude de Bavay. Light. September. Fruit large, round oval shape. Color greenish yellow, spotted with red, with small violet colored veins. Flesh juicy, melting and sugary, with a rich, excellent flavor. Tree vigorous and remarkably productive of fine fruit.

Red June. Japanese. Deep red. Season very early. Fruit medium to large size, long conical. Color deep vermilion red, with handsome bloom; very showy. Flesh light lemon yellow, slightly sub-acid, of good and pleasant quality. Small pit and half cling. Tree vigorous, hardy, upright, spreading and handsome.

Satsuma. Japanese. Red. Midseason. Fruit medium to large, broadly conical, with a blunt point; suture very deep. Color very dark red, with greenish dots and blue bloom. Flesh blood red, rather coarse and acid, fair to good in quality; clings to the pit. Midseason. Tree very productive.

Shipper's Pride. Red. First to middle of September. An unusually thrifty grower. Very productive. Fruit of large size and nearly round. Color light red, white bloom. Flesh red, firm, sweet, juicy. Quality fine. Excellent for canning. An unusually good shipper, being a long keeper. A splendid market plum. Originated near Lake Ontario, N. Y.

Shropshire Damson. Purple. October. Fruit is small size, roundish, but larger than the old-fashioned Damson. Color purple. Flesh amber colored, juicy,

quality good. Tree vigorous, hardy, productive. Of great merit for preserving. English origin.

Weaver. Hardy. Dark red. Midseason. Dr. Ennis, of Clinton, Iowa, kindly furnishes the following description:

It is one of our ordinary wild Plums, of fine size, good flavored and wonderfully productive. The tree is very hardy, never injuring even in our severest winters. Size medium, oblong, flattened. Color dark red, with purple bloom. Pit free. A good canning Plum. Where good cultivated Plums can be raised, this Plum may not have much value, but in the west and extreme north it is valuable. Productiveness is increased by planting a number of them near together or grouping them with other kinds in a cluster. Origin, Iowa.

Wickson. Japanese. Deep red. Late September. Fruit is very large size, often 8 to 9 inches around. Color deep maroon red, covered with a light bloom. Flesh firm, and a long keeper; has an aromatic, almond-like flavor; meat is a deep, dull yellow; pit small. Fruit in shape is oblong, pointed. The Cornell University Experimental station reports that the tree has been perfectly hardy with them. Tree is a good and upright, compact grower, something of a vase shape; fruit evenly distributed over the tree, and is very productive. An enormous bearer. "Wickson bears the largest Plums we have ever seen; 22 degrees below zero did not even brown the pith of the late shoots."—Rural New Yorker.

Wild Goose. Light red. Middle August. Fruit medium size, roundish. Skin thin, shiny, bright light red. Flesh yellow, pulpy, very sweet, juicy when fully ripe. Pit clings. It is advised to pick the fruit 3 or 4 days before ripening, and ripen in the house; if left to hang on the tree too long they become too soft for shipping. The tree is a poor self fertilizer and should have other plum trees, with an abundance of pollen, planted near. Origin, Tennessee.

Yellow Egg. Yellow. Late August. Fruit very large and beautiful, oval, narrow at ends. Skin light yellow, with thin white bloom. Flesh firm, coarse, acid, becoming sweet by ripening. Excellent for cooking. Vigorous and productive.



Select Peaches

IN PLANTING Peaches, cut back the trees severely. This is of the highest importance. The trunk should be reduced about one-third, and the side branches back to one bud. This lessens the demand upon the roots, and enables the remaining buds to push more vigorously.

PEACH FRUIT is produced on wood of the last season's growth, hence the necessity for keeping up a good supply of vigorous annual shoots all over the tree. Keep the ground clean and mellow around the trees. Keep the heads low—the trunk ought not to exceed 3 feet in height. Every spring prune and shorten the shoots of the previous year's growth; thus keeping the head round, full, and well furnished with bearing wood. Cut weak shoots back about one-half, strong ones, one-third; but see that you have a sufficient supply of fruit buds.

Admiral Dewey. Freestone. Skin a deep orange yellow, with crimson cheek; flesh clear yellow of uniform color and texture to the stone; juicy, melting quality; ripens with Triumph; one of the best early freestones.

Alexander. Deep red on greenish white. Flesh white. Season late July. Fruit about medium size. Flesh whitish, sometimes stained next the skin; half melting, juicy and sweet. Stone small, and adheres but slightly. Tree healthy and vigorous, prolific, bears young. Introduced from Illinois.

Amsden. Fruit medium size, color red, beautifully shaded and mottled with a very dark red, nearly covering the greenish white ground; flesh white, with a delicious flavor when ripened on the tree. Ripens very early.

Belle of Georgia. Very large; skin white, with red cheek; flesh white, firm and excellent flavor; the fruit is uniformly large and showy; very prolific bearer. A seedling of Chinese Cling.

Beer's Smock. Orange red on yellow. Flesh yellow. Season first part of Oc-

tober. Fruit large, oval, well calculated for distant market shipment. Flesh bright yellow, red at stone, moderately juicy, rich. Freestone. Valuable for drying purposes and for canning. Tree vigorous. One of the most valuable late Peaches. A seedling of the old Smock Free. Origin, New Jersey.

Carman. Red. Flesh yellow. Early. The Carman (named after the late editor of the Rural New Yorker) is described by that valuable paper as follows:

"Promises to stand at the head for a general long distance, profitable market variety. One of the hardest in bud. The early bearing habit of the Carman is remarkable. In quality ranking absolutely superior to anything ripening at the same season. In its shipping qualities—in freedom from rot—this excellent Peach is unsurpassed."

The originator reported, "six regular crops from the original tree in as many years." Season very early; size large, and just about half the Peach is striped and mottled with crimson, the rest being in light buff color.

Newark, New York State

Champion. White, red cheek. Flesh white. Season August. Fruit grows very large many specimens measuring 10 inches in circumference. Color a creamy white,



Crawford's Early.

with red cheek. Flesh white; flavor delicious, sweet, rich and juicy. Freestone. Tree very hardy and productive. Its record covers withstanding a temperature of 18 degrees below zero, and of bearing a heavy crop in 1890, when there was an almost total failure of the Peach crop on account of the extreme cold. A good shipper. Comes from Illinois.

Chair's Choice. Deep yellow with red cheek; firm; few days earlier than Smock. September.

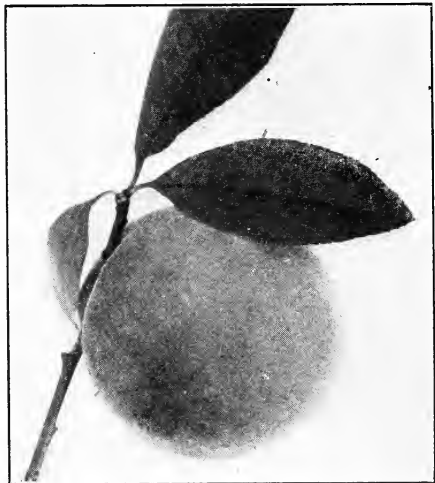
Crawford Early. Red. Flesh yellow. Season early September. Fruit very large, handsome. Color a beautiful, showy yellow and red cheek. Flesh deep yellow, very juicy and rich, and of splendid flavor. A magnificent large yellow Peach of splendid quality. A variety most desirable and well deserving of its great popularity, for its size of fruit, beauty of color, and productiveness make it one of the most popular orchard and "home use" varieties. A perfect freestone. Tree is very productive. Origin, New Jersey

Crawford Late. Red. Flesh yellow. Season late September. Fruit very large,

roundish; surface yellow, with a broad dark red cheek. Flesh deep yellow, very juicy, rich, of good flavor. Tree productive. What is said of the Early Crawford can be repeated of this variety. In color, size, quality, and for general all-around good points, our two Crawfords are fine fellows, and will please. For home use or market, they can be depended upon. Origin, New Jersey.

Crosby. Yellow, splashed red. Flesh yellow. Season middle of September. It unquestionably is one of the hardest Peaches of good quality. It has borne immense crops where other kinds in the same orchard were killed. The fruit is full medium size, roundish in form, slightly flattened; with a distinct seam on the blossom end. Color orange-yellow, splashed and striped with carmine. Flesh is yellow, with red at the pit, firm, moderately juicy and of good quality. Stone very small. Tree an enormous bearer. Has been tested for ten years in the bleakest parts of New England and has proved itself to be first class in every way. Originated in Billerica Mass.

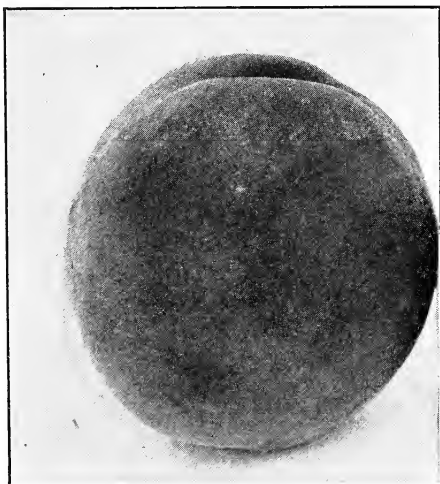
Elberta. Red. Flesh yellow. Season latter part of September and early October. Fruit above average in size, round.



Champion.

Skin golden yellow, covered with a bright crimson blush; very handsome. Flesh pale yellow, tender, juicy, good quality. Entirely freestone. Elberta fruit can be

gathered before it is ripe, and it will ripen up without rotting. A remarkably profitable market sort. Is being heavily planted for orchards. Bears transportation well.



Elberta.

Tree vigorous, hardy, and comes into fruiting young. Origin, Georgia.

Fitzgerald. Yellow and red. Flesh yellow. Season middle September. Origin, Oakville, Ontario, Canada, outside the "Canadian Peach Belt," in a cold section, where Peach growing as a business was never made profitable with other varieties, but where Fitzgerald proves suitably hardy. Fitzgerald commences to bear fruit young. Fruit very large size, larger than Early Crawford; classed among the best for good quality of fruit. In bearing qualities, Fitzgerald ranks with the heaviest croppers. One strong point is the smallness of the pit

Foster. Yellow, red cheeked. Flesh yellow. Season early to middle September. Resembles Early Crawford in general character and appearance, and is said to be seedling of that popular variety. Ripens with Early Crawford. Originated in Massachusetts.

Greensboro. Red. Flesh white. Season extremely early. Fruit medium to large size. Color red, shaded with yellow. Flesh white, juicy, good.

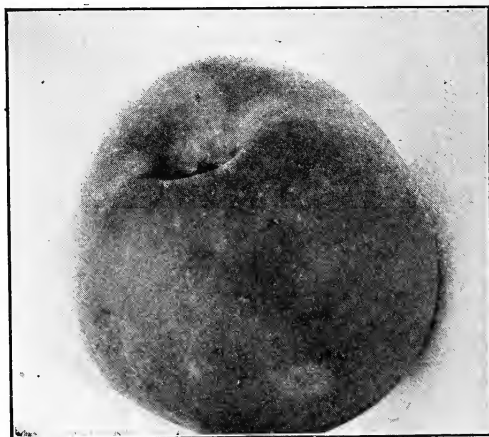
Globe. Yellow, red cheek. Flesh yellow. Season latter part of September. Fruit globular and of very large size, frequently measuring 12 to 14 inches in circum-

ference. Flesh firm, juicy, luscious and a freestone. Tree a rapid grower and an enormous bearer. Good shipper. Originated in Pennsylvania.

Hill's Chili. Yellow, shaded red. Flesh yellow. Season late September. Fruit full medium size. Flesh yellow, rather dry. Tree hardy, productive, a valuable market sort. Origin, Monroe County, N. Y.

Heath Cling. Yellowish white, red cheek. Flesh pale. Season very late. Fruit very large when season admits of it fully maturing; in the north it matures fully in the warmest seasons only. Surface quite downy, pale yellowish white, sometimes faintly tinted with red next the sun. Flesh pale, exceedingly juicy, melting, sweet rich flavor. A clingstone. Season very late, about middle autumn, and the fruit may be kept nearly until winter. Tree quite hardy and vigorous. Origin, Maryland. This is the only real clingstone that we grow.

Longhurst. Yellow, red cheek. Flesh yellow. Season late September. The fruit resembles Early Crawford, being of excellent flavor, size and quality. This is a new Peach, originated in Ontario, Canada, and, as might be supposed from its birthplace, is hardy, bearing annually large crops. The season of ripening and the hardness of the tree make it valuable in colder climates.



Greensboro.

Michigan Chili. Yellow and dark red. Flesh yellow. Season late September. Fruit large. Flesh yellow, juicy. Tree vigorous, hardy grower. A valuable orchard variety. Very productive.

Morris White. Creamy white. Flesh white. Season middle of September. Fruit rather large, roundish; surface rather downy, of pale creamy white, rarely tinged with purple to the sun. Flesh slightly firm, wholly white, very free from the stone, melting, juicy, of a good, rich flavor. It is at its best in the middle states, though popular almost everywhere.

Mountain Rose. Nearly white, dark red cheek. Flesh white. Season medium early. Fruit large, roundish. Color whitish, covered with light and dark rich red. Flesh white, slightly stained at the stone, sweet, juicy. Separates freely from stone. Valuable sort for market. Origin, New Jersey.

Niagara. Originated in western New York, where it has been well tested, surpassing both Elberta and Crawford in size, color, quality and vigor; ripens between Crawford and Elberta.

Old Mixon Free. Red. Flesh light. Season middle of September. Fruit large, roundish, slightly oval, one side swollen. Flesh light colored and deep red at the stone, tender, rich, excellent. Skin pale, yellowish white, marbled with red, and with a deep red cheek when fully exposed. Succeeds well in all localities.

Richards. Skin whitish yellow, red cheek. Flesh light. Season middle of September. Received the first prize at the State Fair at Syracuse, N. Y., in 1895, for beautiful shape, color, quality and extreme size. In 1892 after thorough investigation, we purchased the original tree of the originator, and we now have complete control of the only stock of this variety. Fruit is handsome and showy in color, and of most excellent quality. Bears shipment well. Tree hardy. Origin, central New York.

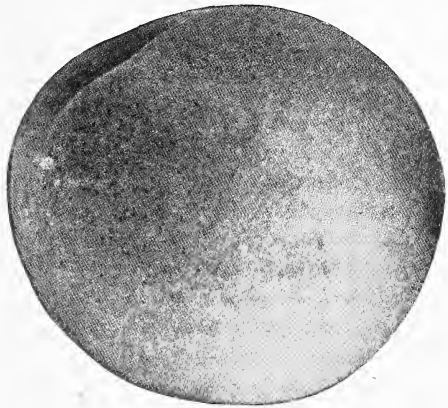
Salway. Yellow, crimson cheek. Flesh yellow. Season very late. Fruit large, roundish. Flesh deep yellow, red at pit, sweet, juicy. A freestone. A very late, valuable market sort.

Stump the World. Red. Flesh white. Season middle and last of September. Fruit large, slightly oblong, with red cheek. Flesh white, with an excellent flavor, and free from the stone. Vigorous and productive.

Steven's Rareripe. White, shaded red. Flesh white. Season late September

and early October. Fruit large. Color white, shaded and mottled red. Flesh juicy, high quality. Reported as producing remarkably large crops in the vicinity of the Hudson River, New York State. Tree a heavy and regular bearer. Commences to ripen immediately after Late Crawford, and continues three or four weeks.

Triumph. Orange-yellow, red cheek. Flesh yellow. Season extremely early. Fruit large with a small pit; round; skin dark orange-yellow, nearly covered with



Triumph.

rich red and showing dark crimson on the sunny side. Flesh bright yellow, and ripens up all at once, and evenly, clear to the pit. When fully ripe separates quite readily from the stone, so that it may fairly be classed as a freestone; quality good. Two-year-old trees have produced over half a bushel of fruit per tree. Origin, Georgia.

Wheatland. Golden yellow, crimson cheek. Flesh yellow. Ripens September, between Early and Late Crawford. Fruit large, roundish, of excellent quality. Flesh yellow, very firm, and bears shipment well. Tree productive. The originator reported 39 peaches, weighing 19 pounds. Origin, Wheatland, N. Y.

Yellow St. John. Freestone. Fully one week earlier than Early Crawford; a trifle smaller than latter, especially old trees; yellow, with deep red cheek; juicy, sweet and highly flavored; quite free.

Select Apricots

THE SEASON of ripening coming between the cherries and peaches, makes this fruit very desirable and valuable. The dainty, showy appearance of Apricot fruit, its good quality that surely appeals to the taste of any who eat Apricot fruit, and the fact that Apricot fruit is always in good demand in the city markets, and at good high prices for fancy table use, are points so favorable that the planting of Apricot trees should have more attention from growers who raise fruit for market and growers who raise fruit for their family and themselves to eat.

Acme. Is recommended by a good authority, who states: "The Acme is the largest and of choicest quality of any we have ever grown. It is also very beautiful in appearance. It seemed last season to have the power to resist the adverse conditions of the rainy spring beyond that of any other Apricot we were fruiting and made a fair crop where others failed."

Early Golden. Color is wholly pale orange. Season middle of July. Fruit small ($1\frac{1}{4}$ inches in diameter), roundish oval. Flesh orange-yellow, moderately juicy, rich and sweet. Free from the stone. Kernel sweet. Tree hardy, productive. Origin, Dutchess County, N. Y.

Early Moorpark. Yellow, with red cheek. Season last of July. Fruit medium size. A freestone. Superior quality.

Large Early Montgamet. Pale yellow, with a tinge of red on sunny side. Season middle or latter part of July. Fruit large and round; quality the best, and a fine shipper. A very choice medium early sort; one of the very best in cultivation. Tree is a good, strong, healthy grower, and will stand a great deal of cold. Has borne heavy crops of fruit with us, and from what we have seen, consider it one of the very best Apricots in cultivation.

St. Ambrose. Yellow, shaded with dark orange. Ripens here the fore part of July. Fruit large, freestone, the best quality. This is an extra fine Apricot. Tree a good grower and very productive. Very hardy. In heavy fruit with us, and from what we have seen, consider it one of the best in cultivation.

Select Quince

FROM Cornell Agricultural Experiment Station Bulletin, by Prof. L. H. Bailey: "The Quince crop is reliable, and not easily destroyed by capricious variations in weather. Trees are hardy and productive, easy to prune and spray, and diseases and insects, while rather numerous, are held in check with comparative ease, with the single exception of pear blight.

"The lands should be retentive of moisture, but not wet and soggy. Good drainage is as essential to quince culture as it is to the growing of pears or other fruits. Quince orchards should be given clean culture. The roots are usually shallow, and very shallow tillage is generally best. Probably best results will be obtained if trees are set 14 or 15 feet apart each way.

"The first fruits of consequence may be expected when the tree is three or four years planted, although the Quince does not arrive at full productiveness until it is nine or ten, or more years old. An average crop for an orchard in full bearing is one bushel of first-class fruit to the tree, but this yield is exceeded in some years. Careful attention to handling and planting pays as well with the quince as with other fruits. Pear-blight is the most serious disease of quince trees, and there is no way of keeping it in check but to cut off and burn all affected parts.

"Three insects are mischievous in western New York quince orchards: The borer (search for it twice a year), the codling moth (put Paris green in the Bordeaux mixture), and the quince curculio (jar it onto sheets, as you would the plum curculio)."

Bourgeat. Bright golden yellow. Ready for use from November through to March or April. Pronounced by a responsible grower, who has fruited it for 6 years, a profuse bearer of large, handsome, showy, richly colored fruit, that actually keeps like Baldwin apples, in a good cellar, until spring. The core is very small. Will cook without hardness, like apples. Tree robust grower. Origin, France.

Champion. Greenish yellow. Season very late. Fruit large, distinctly pear form, furrowed about the top. Flesh tender. Tree bears abundantly while young. In some places it does not ripen well. A good keeper.

Meech's Prolific. Pale, bright orange, with a thin fuzz. Midseason. Fruit large, and in shape ranges from nearly apple shape to short pear shape. Very

fragrant, good flavor. **Bears when quite young.** Productive. Supposed to have originated in Connecticut.

Orange (Apple Quince.) Bright pale orange. Ripens after mid-autumn, and keeps until February under good conditions. The surface only moderately fuzzy. Fruit variable in size and shape, but in the ideal or original form is distinctly flattened at both ends, like an apple. The most extensively cultivated of the old varieties.

Rea's Mammoth. Color rich orange, surface very smooth. Ripens early. Fruit large to very large, pear form. Flesh of excellent quality. Tree a very strong grower, distinguished by its short stature. Does best under high cultivation. We consider that for orchard purposes, as well as a garden tree, it is very valuable. Origin, Coxsackie, N. Y.

Select Grapes

THE SOIL for the Grape, should be dry and warm, thoroughly drained, deeply worked, and well matured, always bearing in mind that a sunny exposure is desirable—a slope to the south or east is the best. If a northern incline must be had, only the hardy, early ripening sorts should be planted.

List of Leading Grapes

Agawam. See Rogers' No. 15.

Brighton. Red. Season early. Its remarkable hardness of vine, large and compact bunch, delicate skin, almost seedless pulp, and rich flavor, are qualities that make the Brighton a most desirable sort. It has thick, large foliage and is thus enabled to stand the heat of summer. Being a vigorous grower, it exhibits extreme hardness, and is enabled to endure the winter in colder sections. Valuable both as a family grape and for vineyard purposes. Berries above the medium size to large; color usually of a red when first ripe, and changing to a reddish purple, if allowed to hang long on the vine, covered with a blue bloom. Fruit keeps well for an early grape, either on or off the vine.

Campbell's Early. Black. From middle to last of August here. The vine is of

strong, hardy, vigorous growth; the foliage thick, heavy and perfectly healthy, bears abundantly of large, handsome clusters. The fruit ripens very early, and is of excellent quality; is a remarkably good keeper and a good shipper.

Catawba. Well known as the great wine grape of Ohio, Kentucky, etc., bunches large and loose, berries large, of a coppery red color, becoming purplish when well ripened; where not subject to rot, holds its own as one of the best varieties.

Concord. Black. Latter part of September here. There is no variety as generally planted as this, extensive both as to the quantity of vines planted and the many localities where it is grown. The Concord succeeds well in most all parts of the country. The vine is a very vigorous grower, enormously productive, almost free from disease. Berries large, round, black, with a blue bloom. Bunch large, compact, shouldered. Skin tender.

Flesh juicy, sweet. A profitable market sort. The fruit is too tender for shipping long distances.

Delaware. Red. Early September. Its earliness, hardiness, and admirable sweetness have become well known to the public. Berries rather small. Skin of a beautiful, bright red color. Bunch medium in size, compact. Flesh is without hardness or acidity in its pulp, exceedingly sweet; juicy. Vine moderately vigorous and productive. Bears when young. Oftentimes injured by allowing it to overbear. Should have a strong, rich soil to do its best.

Green Mountain. This, the earliest white grape, has been thoroughly tested over a wide area, and has proved most satisfactory. It combines hardiness, fruit-

ripens uniformly and has generally the appearance of the Worden. Mr. McPike has sent the grapes to all parts of the country, and the comments are most favorable upon its wonderful size, flavor, hardiness and beauty.

Moore's Diamond. White. Ripens about with Delaware. Described as a pure native; leaf resembles Concord; free from mildew. Bunch large, compact. Berry about the size of Concord. Color greenish white, with a yellow tinge when fully ripe. Flesh juicy, sweet to the center, free from foxiness, and almost without pulp. Quality very good. Vine vigorous and productive. While the skin is thin, it is sufficiently tough to stand handling and shipping well. Originated by Jacob Moore.



Salem

Concord

Delaware

Wilder

fulness, vigor, good size and excellent quality. Bunch medium to large, shouldered; berries medium, greenish white; skin thin, tough; pulp tender, sweet, with few seeds; of excellent quality; free from foxiness, and the flavor is excellent, ranking in this respect as a grape of the first class. It is the first white grape to ripen.

Lindley. (See Rogers' No. 9.)

McPike. This grand new variety was originated in south Illinois. The McPike is a seedling of the Worden and partakes of all the good qualities of the Concord and Worden to a marked degree. Perfectly hardy, as easily grown as Concord or Worden, with a leaf unprecedented; it is earlier than the Concord; bunches large, even and compact, berries even in size, covered with a beautiful bloom, blue-black in color,

Moore's Early. Black. About twenty days earlier than Concord. Fruit large and showy, and the variety is remarkable for size, beauty, productiveness, earliness and hardiness. It received first premium from New England fairs and the Massachusetts Horticultural Society. Fruit black, very large and handsome, with a heavy bloom. Quality about the same as Concord. Vine exceedingly hardy. It has stood 20 degrees below zero, and has been exempt from mildew and disease. This hardy variety was raised by John B. Moore, of Concord, Mass., and was first fruited in 1872.

Niagara. White. Ripens with the Concord. The originator says: "This new white Grape originated in Lockport, N. Y. in 1868 and is a cross between

the Concord and the Cassady; first fruit in 1872; it has since regularly borne large crops of fine fruit. The vine is a remarkably strong grower and very hardy. The leaves are thick and leathery, and dark, glossy green. Bunches very large and uniform, and very compact. Berries as large as, or larger than Concord. Skin thin but tough, which insures their shipping qualities. Quality good, very little pulp, melting and sweet to the center."

Pocklington. White. Ripens with Concord. Vine very vigorous, hardy and productive. Bunch and berry of good size. Color a light lemon yellow. Flesh moderately tender, sweet, with a peculiar aromatic flavor. Originated at Sandy Hill, N. Y.

Rogers' No. 9. (Lindley.) Red. Rather early. Bunches medium size, rather long and compact. Berry medium size, round, reddish, sweet. Vine vigorous, productive.

Rogers' No. 22. (Salem.) Purple. Early when not overstocked, sometimes as early as Delaware. Bunches large, compact, shouldered. Berries large, round, purple. Skin thick and firm. Flesh sweet and tender, with a rich, aromatic flavor. Vine moderately vigorous, hardy, healthy. It is a splendid keeper and of good quality.

Salem. See Rogers' No. 22.

Vergennes. Red. Ripens with Concord.



Niagara

Moore's Diamond

Brighton

Moore's Early

Rogers' No. 15. (Agawam.) Red. Ripens soon after Concord. Bunches large, generally loose. Berries large, round. Color dark red, or maroon. Flesh tender, juicy, vinous, with a high, peculiar flavor. Vine very vigorous, hardy and productive.

Rogers' No. 4. (Wilder.) Black. Ripens with the Concord. Bunches very large, shouldered, compact. Berry large, round, black, with a thin bloom. Flesh tender, sweet and sprightly. Quality best. Vine vigorous, hardy and productive. Succeeds in many localities.

A fine red variety of delicious flavor. Very hardy and a strong grower. Clusters large. Berries large, meaty and tender. Origin, Vergennes, Vermont.

Wilder. See Rogers' No. 4.

Worden. Black. Ten days earlier than Concord, and superior to it in flavor. Bunches large, compact, handsome. Berries large, round, of excellent quality. Extra hardy. A seedling of Concord. Worden is a good Grape.

Select Currants

THE CURRANT combines hardness, ease of culture, great and uniform productiveness, pleasant flavor and early ripening, making one of the most valuable fruits. Good cultivation and pruning will more than triple the size of the fruit. Old bushes should have the old wood cut out, and thrifty shoots left at regular distances. Old manure should be spaded in about the roots, and the soil kept clean, cultivated and mellow. As the Currant starts and expands its leaves very early, this work should be performed as soon as the frost leaves the soil. Currants thrive best when they are somewhat shaded, consequently an excellent position for them is in the rows of young orchard trees. They can be successfully planted spring or fall.



Perfection.

Set 4 to 5 feet apart each way.

Cherry. Red. Ripe early July here. Fruit very large, nearly twice the size of the common Red Dutch; often 5-8 of an inch in diameter; round, quite acid. Clusters moderately short. Growth of plant is tall, large and luxuriant.

Black Champion. Very productive, large bunch and berry, excellent quality, strong grower, the leading well-tested, black sort.

Fay's Prolific. Red. Ripe about July 10 to 15 here. A variety of great value on account of its fine quality and the extraordinary size of its bunches. The bunches are really enormous, being sometimes over 7 inches in length.

Lee's Prolific. Black. The fruit is of enormous size, wonderfully productive and of agree-

able flavor. Long stems of large berries. Very desirable for canning, and while a taste for this fruit often has to be acquired, it is always highly esteemed by those who are accustomed to use it. Plants are very hardy, and it is well suited to cold country sections.

Moore's Ruby. Light red. Ripe early July here. A new sweet, red Currant, recently introduced by Mr. Jacob Moore, the originator of the Moore's Diamond Grape. Prof. L. H. Bailey of Cornell University, says of it: "Everything I have seen of the Moore's Ruby Currant pleases me, so far as its value for home use and dessert is concerned. It is a Currant of most excellent quality."

Perfection. The color is a beautiful bright red. Size as large or larger than the Fay, the clusters averaging longer. The Perfection has a long stem from the point of attachment to the bush to the first berry, making it easy to pick without crushing any of the berries. It is a great bearer, and on account of its great productiveness the plants should be kept well cultivated and fertilized, as should all heavy bearers. The Perfection ripens about the same time as the Fay. Quality rich, mild, sub-acid; plenty of pulp, with few seed.

White Grape. White. Ripe early July here. Very large. Mild flavor. Excellent quality; good for table use. Very valuable.

Wilder. Red. Ripe middle July here. Fruit large, fine flavor. Very profitable for market, being a great yielder.

Choice Asparagus For Fall or Winter Setting

HOW TO GROW for family use: No vegetable that can be produced so easily and cheaply. A bed of Asparagus of about 100 plants will give an abundant supply for an ordinary family. Asparagus is a very profitable vegetable to grow, as the crop is always salable at some figure, and probably the reason the market has never been glutted is due to the fact that asparagus culture has been regarded by most people as extremely difficult. We know instances where it has paid \$250 to \$400 per acre clear.

To Plant for Market. Dig the soil deep, and incorporate in it a heavy coat of rotted manure or well decomposed compost. Plant the roots in rows four to six feet apart, and three feet between the rows, eight or ten inches deep, crowns up. Cover the bed in fall with manure; fork it in the spring. **For Home Garden,** set plants one foot apart in rows 18 inches wide, for hand hoeing, with same treatment as for market.

Cultivation and Cutting. After the plants are well started, give frequent and thorough cultivation, and draw a little earth into the furrows at each hoeing until they are filled. Early the next spring spade in a heavy dressing of manure, and one quart of salt to each square rod, and cultivate well until the plants begin to die down. The next season the bed may be cut over two or three times, but if this is done all the shorter shoots, no matter how small, should be cut, and after the final cutting give a good dressing of manure, ashes and salt. The next season the bed should give a full crop, and be annually dressed with manure, ashes and salt after the last cutting, and well but not deeply cultivated, until the plants occupy the whole space. In fall, as soon as tops are yellow, cut and burn them.

Insects. Young beds are sometimes attacked by black beetles, and if the grower does not have chickens running loose, a light dusting of air-slacked lime will end the beetle trouble. Poultry will be glad to do a good turn in the Asparagus bed for the harm they do in other places.

Conover's Colossal. A variety universally acknowledged to be an improvement on the older sorts, on account of its immense size, and being remarkably tender and high flavored. It is claimed that it can be cut one year sooner than other varieties. A profitable market sort. We recommend this very highly.

Barr's Mammoth. The largest of all, is very early, and quite tender and deli-

cious; light color. The yield is simply enormous.

Donald's Elmira. New. Very large; 12 stalks averaged 4 lbs. Very tender and succulent. Profitable for market and desirable for family use.

Palmetto. Extensively grown for market on account of earliness, large size, and fine appearance.

Select Rhubarb

RHUBARB, familiarly known as the Pie Plant or Wine Plant, is cultivated in gardens for its leaf stalks which are used for pies, tarts, canning, etc. The large size, fine texture and superior quality of the new varieties of Rhubarb over the old cultivated "Pie Plant" cannot be conceived by those who have never grown it. It is very profitable to grow for market purposes, is always in demand, and commands good prices. It grows very rapidly; requires little cultivation.

Planting and Cultivating—Plants should be set four feet apart each way, and the stalks will be fit for use the second season after planting. It is benefited by a heavy coat of strong, rich manure.

Myatt's Linnaeus. Early, very tender, and has a mild sub-acid flavor, not "stringy" or tough. The plant is large, and for pies or other culinary purposes it is the housewife's favorite.

Eaton's Peach Flavored. Very early. Large, tender, delicate, rich peach flavor. For pie and sauce it is excellent.

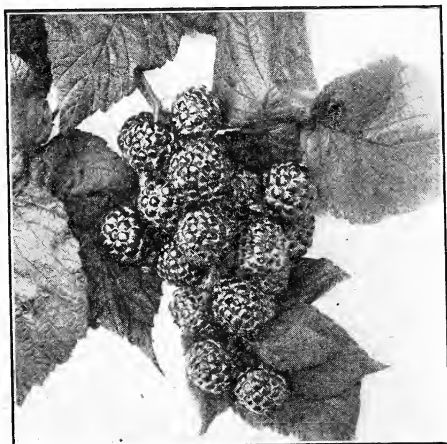
Victoria. Medium size, and quite a favorite in certain sections. It is early, tender and quite productive.

Set 3 ft. apart in rows; have rows 7 ft. apart.

Select Raspberries

SET RASPBERRIES in rows that will admit of free cultivating. Five or six feet one way, by two or three feet the other way allows enough room. Any good, strong, mellow soil, that is not too wet, and which has been deeply pulverized, will raise good raspberries. The canes which grow in one season bear the next. As soon as done fruiting, remove the old canes to allow the new ones full use of the land. Varieties which sucker very freely must have the suckers hoed away when they first appear above ground, otherwise they will not fruit so heavily.

Black Diamond. Black. Time of ripening here, first half of July. The Black Diamond has shown itself to be the most profitable black Raspberry in the world. It is sweeter than anything else on the market, more pulpy, and contains fewer seeds; at the same time is



Black Diamond.

firm and an A No. 1 shipper. It is a grand berry for drying, and dried berries being a jet black, and containing all the richness, fine flavor and sweetness of the fresh fruit.

Both the fresh and dried fruit command a high price on the market. We are offered 2 cents per pound more for our Black Diamond dried fruit than is being paid for choice fruit of other varieties. As our mature plants have yielded over 5,000 quarts per acre, this difference alone means \$33 per acre.

For health and vigor of plant, it cannot be surpassed. We have not seen one single stalk of Black Diamond affected with anthracnose. We never have to spray the Black Diamond, while other varieties, side by side with it, lose from an eighth to a quarter of their growing wood by fungus. One of the secrets of its great success is its ability to withstand the attacks of fungus.

Columbian. Purplish red. July 12 to early August here. A seedling of the Cuthbert grown near the Gregg blackcap Raspberry, and believed to be a cross between the two. Very hardy, enduring 28 degrees below zero without harm. Wonderfully prolific.

A fine evaporating berry, retaining color, form and flavor in a most remarkable degree, and selling for fully one-third more than black caps.

An excellent shipper. For canning purposes it holds its form, is of a beautiful color, is sweet and rich in flavor, and shrinks very little in canning.

Fruit very large; shape somewhat conical; color dark red, bordering on purple; adheres firmly to the stem, and will dry on the bush if not picked; does not drop off, like other berries. Seed small, and deeply imbedded in a rich, juicy pulp, with a distinct flavor of its own, making it a most delicious table berry. Fruiting season is very uniform, extending from July 12 to early August.

Cuthbert. Red. Reports from all parts of the country uniformly rank the Cuthbert high. It is a tall, vigorous grower, very productive and hardy, and remains in fruit a long time. Berries large, conical, deep crimson, very firm and of excellent quality.

Cumberland. In size and fruit is enormous, surpassing any other sort; quality very similar and fully equal to Gregg. Possessed of great firmness and will stand long shipments; bush exceedingly healthy, shooting up straight, stocky canes, well adapted for supporting their loads of large fruit; ripens mid-season.

Golden Queen. Golden yellow. The originator says: "In flavor it rivals that high quality Raspberry, Brinkle's Orange. In color a rich, bright, creamy yellow, imparting to it a most appetizing effect, both in the crate and upon the table. In size it challenges the large Cuthbert. In vigor it fully equals its parent, the Cuthbert. In productiveness, it excels the prolific Cuthbert. In hardiness it has no superior."

Possibly not practical to set a large

field, but for home use and in a small way for market purposes, is desirable. Origin, Iowa.

Gregg. Black. First half of July here. Berries large, black, with a light bloom, comparatively free from seeds, and in quality good. The growth of the cane is very strong. As a market berry it is exceedingly valuable, the fruit being very firm, so as to ship in the best of order. Origin, Indiana.

Kansas. Black. Large, round, firm, moderately juicy, strong grower and very productive; ripens early; considered one of the best market berries on account of handsome appearance.

Loudon. Red. July 10 to 15 here. The Loudon is pronounced by E. S. Carman of The Rural New Yorker, the best red Raspberry in existence. Its great value lies in its extreme hardiness.

The canes are very strong, vigorous and hardy. Fruit bright red. With us, the Loudon averaged about the same size as the Cuthbert with ordinary culture. When well grown, the Cuthbert is perhaps the larger. The Loudon is perhaps the hardiest red berry grown, and will be largely planted, and is certain to become one of the leading market sorts.

Marlboro. Red. Early July here. One of the hardiest, earliest, largest and best carrying berries. Splendid quality, handsome color, and a great bearer. In regard to its earliness, The Rural New Yorker acknowledged the receipt of ripe fruit on the 26th of June.

Miller. Red. Bright red color; is a healthy, vigorous grower, canes strong, well adapted to carrying their load of berries, firm and a good shipper; an early ripener.

Ohio. Black. First half of July here. Very hardy, vigorous, and an enormous bearer. Flavor superior, and will bear shipping well and keep long. This is one of the most valuable blackcaps yet introduced. It takes high rank for drying purposes.

Plum Farmer. Black. A vigorous, stocky growing blackcap, very healthy and attractive in appearance; productive, bearing heavy crops of large, fine jet

black berries; excellent quality and a good shipper; one of the most valuable market berries, as it commands top prices.

St. Regis. Another season's trial confirms all that has been said for this variety; it produced a fine crop of berries all through the fall of 1912. Fruit commences to ripen with the earliest and continuing on young canes until October. Berries bright crimson, large size, rich, sugary with full raspberry flavor. Flesh firm and meaty, a good shipper. Wonderfully prolific, the first or main crop equalling any red variety known. Canes stocky, of strong growth, with abundance of dark green, leathery foliage. Every raspberry grower should test it.

Shaffer's Colossal. Purple. This plant is a strong and large grower, is "ironclad" in hardiness, and yields an immense



St. Regis.

crop of dark, purplish red berries. The fruit is large, firm, and of a sprightly sub-acid flavor. This is a cap variety, and increases from the tips, like the blackcap.

Set 2 ft. apart in the row; have rows 6 ft. apart.

Select Blackberries

Erie. Black. Last half of August here, holds out late. A strong, healthy grower, free from diseases liable to attack the Blackberry. Productive as the Lawton, and without its failings. Very early; ripens even before the Wilson. Extra good quality. Fruit large, fine, berries jet black in color, firm in texture, making it necessarily a popular sort for distant shipment, as well as for home market. Hardy, having withstood a temperature of 25 degrees below zero. Very desirable for our customers in northern climates. A chance seedling, which sprung up on the shores of Lake Erie, in northern Ohio.

Early Harvest. This is one of the earliest blackberries in cultivation; a compact dwarf grower; fruit medium size and fine quality; an enormous bearer.

Eldorado. Very vigorous and hardy, enduring the winters of the far northwest without injury, and their yield is enormous. The berries are large, jet black, borne in clusters and ripen well together; they are very sweet, melting.

Blowers. Fruit large, productive; a strong grower; a promising new variety.

Rathbun. Black. Fruit jet black, with a high polish, and sufficiently firm to handle and carry well. The whole crop is of a very uniform size. A comparison made in the season of 1896, taking the berries in each case just as they averaged, showed that a common strawberry quart box of Snyder counted 164 berries; the same package of Rathbun counted but 45 berries. A specimen measured was $1\frac{3}{4}$ inches in length and $1\frac{3}{8}$ inches in diameter. The fruit of the Rathbun, unlike most Blackberries, has no hard core; in fact, no core is perceived in eating it; all is soft, sweet and luscious, with a high flavor. The plant is a strong, erect grower, and hardy, producing few suckers.

Snyder. Black. Ripens here first part of August. Enormously productive. Medium size. No hard, sour core. Half as many thorns as Lawton or Kittatinny, and they are nearly straight and short.

Gooseberry

Columbus. Greenish yellow. Fruit large, handsome, of excellent quality. The plant is vigorous and productive, and does not mildew. It merits a place in every garden. The editor of The Rural New Yorker says: "It is the best variety yet introduced, and seems close to a perfect Gooseberry for our climate."

Downing. Greenish white. July 15 here. Fruit large, oval. Plant very vigorous and hardy, with stiff, strong shoots. Foliage heavy, covering the fruit from the sun and resisting mildew. Bears most abundantly, and is profitable for market and home use. The best of all the American varieties.

Houghton's Seedling. Pale red. Fruit small to medium size, roundish, oval, sweet. Very productive and valuable.

Industry. Dark red. Fruit large, oval, hairy. Although a foreign variety, it has succeeded admirably, and we have fruited it with great satisfaction for several seasons. Attains a marketable size very early in the Gooseberry sea-

son, thus commanding the high prices of the early market. Bears enormous crops. A remarkably vigorous plant. Flavor excellent. Origin, England.

Pearl. Yellowish green. Fruit extremely large; quality good. The plant is an extremely heavy bearer, and has been found to be entirely free from mildew. A 3-year-old bush is reported as having about 2,500 berries. A seedling of Houghton.

Smith's Improved. Light green when ripe. About July 10 here. One of the largest American varieties. Fruit oval in form, sweet and excellent. Plant vigorous, healthy and hardy. Raised from seed by Dr. Smith, of Vermont.

Dewberry

Lucretia. A trailing variety of the blackberry. Ripens between the Raspberry and the Blackberry. A very desirable fruit.

Set 4 to 5 feet apart each way.



Shrub Planting.

Ornamental Department

Ornamental Trees

Ash, American White. (*Fraxinus Americana*.) A well-known native tree; tall, very straight, with broad, round head and dense foliage.

Balm of Gilead. Balsam Poplar or Tacamahac. *Populus balsamifera*. A native species of remarkably rapid, luxuriant growth, with large, glossy foliage.

Beech, Purple-Leaved. (*Fagus Purpurea*.) Originated in Germany. An elegant, vigorous tree, growing 50 to 60 feet high; the foliage in spring is a deep purple, changing to crimson in the fall.

Birch, Paper or Canoe. (*Betula Papyracea*.) Native of America; forms a large tree; bark brilliant white, leaves large and handsome.

Birch, Purple-Leaved. (*B. Atropurpurea*.) A variety possessing the vigorous habit of the birches and having purple foliage; branches slightly pendulous.

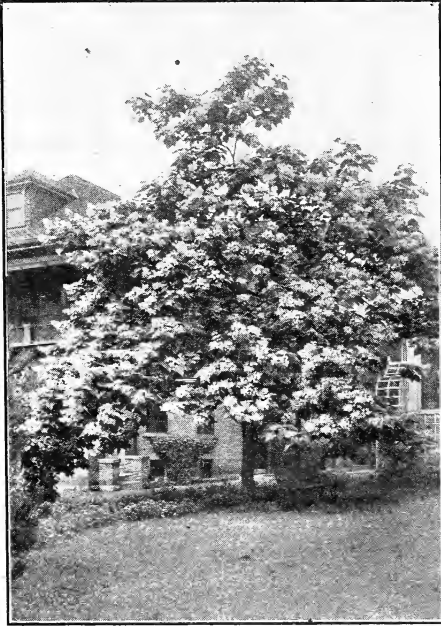
Box Elder. See Maple, Ash-Leaved.

Butternut. (*Juglans cinerea*.) A native tree, of medium size, spreading head, grayish-colored bark, and foliage resembling that of the *Ailanthus*. Nut oblong and rough.

Catalpa Bungei. (Chinese.) A remarkable species forming a dense, round umbrella-like head; makes a beautiful lawn tree when grafted or budded on a high stem.

Catalpa Speciosa. A variety which is said to have originated in the West; it is

very hardy and a rapid grower and is being extensively planted for commercial purposes; has broad, deep green leaves and beautiful large blossoms, making it a highly ornamental tree for lawn or street. Valuable for planting in groves for growing poles, posts and railroad ties.



Catalpa Speciosa.

Chestnut, American Sweet. (*Castanea Americana.*) The well-known variety. Stately tree, with spreading head; when in full bloom, one of the handsomest trees; produces a quantity of edible nuts.

Chestnut, Japan. (*Castanea Japonica.*) Habit and foliage like Spanish Chestnut, fruit very large.

Chestnut, Paragon. (*Castanea.*) A magnificent variety; nuts large, three or more in a burr, of very good quality. Vigorous grower, early and abundant bearer. Trees four years from graft have produced one bushel each.

Chestnut, Spanish. (*Castanea vesca.*) Originally introduced from Asia Minor into Europe. Valuable species both for ornament and fruit. It forms a handsome lawn tree, and produces much larger fruit than the American variety.

Crab, Bechtel's Double Flowering. (*Pyrus Augustifolia.*) One of the most beautiful of the flowering crabs; tree of medium size, covered in early spring with large, beautiful, fragrant flowers of a delicate pink color; very popular for lawns, as it blooms when quite young.

Dogwood, Red-Flowered. (*Cornus flore rubro.*) A variety producing flowers suffused with bright red; blooms when quite young. One of the finest flowering trees.

Dogwood, White-Flowered. (*Cornus florida.*) An American species, of spreading, irregular form, growing from 16 to 25 feet high. The flowers produced in spring before the leaves appear are white and very showy. They begin to appear just as the Magnolia flowers are fading. Foliage glossy and handsome, and in the autumn turns to a deep red.

Dogwood, Welch's Variegated Cornus. The leaves are beautifully blotched, tinted and bordered creamy white in early spring, changing to carmine center and crimson margin in mid-summer and fall, holding its magnificent coloring the entire season. The best variegated leaved tree that will thrive in our climate.

Elm, American White. (*Ulmus Americana.*) A magnificent tree, growing 80 to 100 feet high, with drooping, spreading branches; one of the grandest of our native trees, makes a beautiful lawn or street.

Elm, English. (*Ulmus campestris.*) An erect, lofty tree, of rapid, compact growth, with smaller and more regularly cut leaves than those of the American, and darker colored bark. The branches project from the trunk almost at right angles, giving the tree a noble appearance.

Fringe, Purple. (*Cotinus.*) A conspicuous spreading shrub or small tree with large leaves. Are overhung in mid-summer by cloud-like masses of light, mist-like flowers, having appearance of smoke at a distance.

Fringe, White. (*Chionanthus Virginica.*) A small native tree or shrub, of roundish form, with large, glossy leaves and drooping racemes of pure white flowers, having narrow, fringe-like petals; blossoms in May or June. A superb lawn tree.

Hickory, Shell Bark or Shag Bark. (*Carya alba.*) The most ornamental and valu-

able of the genus. The nuts are whiter and the shell thinner than those of other species.

Horse Chestnut, Common or White Flowering. (*Aesculus Hippocastanum*.) A handsome tree of regular form with showy foliage and covered in the spring with panicles of white flowers marked with red. As a lawn or street tree it has no superior.

Horse Chestnut, Double Flowering. (*A. H. var. alba flore pleno*.) A superb tree with double white flowers in large panicles and of fine pyramidal habit; it is one of the best of the ornamental trees.

Horse Chestnut, Red Flowering. (*A. H. var. rubicunda*.) One of the finest trees in cultivation; flowers a showy red;



European Linden.

blooms a little later than the white; when the two varieties are planted together they make a very effective contrast.

Judas Tree, American. (*Cervis Canadensis*.) A very ornamental native tree, of medium size, irregular rounded form, with perfect heart-shaped leaves of a pure green color, glossy surface above and grayish-green beneath. The tree

derives the name of Red Bud from the profusion of delicate reddish-purple flowers with which it is covered before the foliage appears.

Larch, European. (*Larix Europea*.) A native of the Alps of the South of Europe; an elegant growing, pyramidal tree; valuable for timber.

Linden, American or Basswood. (*Tilia Americana*.) Tree grows about 60 feet high, rapid growing, large size, forming a broad round-topped head; leaves broadly oval, dark green above; light green underneath; flowers are creamy white, fragrant. A splendid street or lawn tree.

Linden, European. (*Tilia Europea*.) A very fine pyramidal tree of large size, with large leaves and fragrant flowers; the leaves change in the fall to beautiful tones of yellow and brown.

Magnolia, Acuminata. (*Cucumber Tree*.) A beautiful native pyramidal growing tree, attaining from 60 to 90 feet in height. Leaves 6 to 9 inches long, and bluish green; flowers yellow, tinted with bluish purple; fruit when green resembles a cucumber, hence the name.

Magnolia, Conspicua. (*Chinese White*, or *Yulan Magnolia*.) A Chinese species of great beauty. The tree is of medium size, shrub-like in growth while young, but attains the size of a tree in time. The flowers are large, pure white, very numerous and appear before the leaves.

Magnolia, Soulangeana. (*M. Soulange's*.) Shrubby and branching while young, but becoming a fair sized tree. Flowers white and purple, cup-shaped, 3 to 5 inches in diameter. One of the hardiest and finest of the foreign Magnolias. Blooms later than *conspicua*.

Magnolia, Speciosa. (*M. Showy Flowered*.) Flowers white and light purple, later than the preceding, and remain in perfect condition upon the tree longer than those of any other Chinese variety.

Maple, Ash-Leaved. (*Negundo fraxinifolium*.) (*Box Elder*.) (*Manitoba Maple*.) Native tree, maple-like in its seeds, and ash-like in foliage; of irregular, spreading habit, and rapid growth.

Maple, Japan. (*Acer polymorphum*.) This is the normal form or type; growth slow

and shrubby; foliage small, five lobed, and of a bright, cheerful green in spring and summer, changing to a lovely dark crimson in autumn; perfectly hardy when well established. One of the most



Horse Chestnut.

beautiful and valuable of small-sized trees.

Maple, Cut-Leaved, Purple, Japan. (*Acer dissectum atropurpureum*.) One of the striking and handsome varieties of the Japan Maples. Form dwarf and weeping. The leaves are of a beautiful rose color when young and change to a deep and constant purple as they become older. They are also deeply and delicately cut, giving them an elegant, fern-like appearance. Makes an elegant and attractive lawn tree or shrub.

Maple, Norway. (*Acer Platanoides*.) Large handsome tree, with broad, deep green foliage; has a very compact growth; attains a height of 100 feet; a valuable tree for parks, lawns or streets.

Maple, Negundo. (See Maple, Ash-Leaved.)

Maple, Purple-Leaved. (See Maple, Schwedler's.)

Maple, Red or Scarlet. (*Acer rubrum*.) A native species, of medium size and rounded head; produces deep, red blossoms which appear before the leaves. In autumn the foliage changes to brilliant scarlet, rendering the tree very conspicuous.

Maple, Schwedler's. (*Acer Platanoides Schwedlerii*.) A beautiful variety with very large bronze-red leaves and young shoots of the same color; a vigorous grower and a most effective ornamental tree; grows about 50 feet high.

Maple, Soft or Silver-Leaved. (*Acer Dasy-carpum*.) A rapid-growing tree of large size, irregular rounded form; foliage bright green above and silver beneath; a favorite street and park tree; attains about the same height or taller than the Norway.

Maple, Sycamore, (*Acer Pseudo Platanus*.)



Wier's Cut-Leaf Maple.

A native of Europe; leaves large, deep green and smooth; bark smooth and ash gray color; rapid upright growth; a beautiful tree for street planting.

Maple, Sugar or Rock. (*Acer Saccharum*.) A well-known native tree, valuable both for the production of sugar and wood; very desirable as an ornamental shade tree.



Norway Maple.

Maple, Wier's Cut-Leaved. (*Acer Wierii Laciniatum.*) A variety of the silver-leaved, and one of the most beautiful, with cut or dissected foliage; rapid growth, shoots slender and drooping; ranks among the best as an attractive lawn or street tree.

Mountain Ash, American. (*Sorbus Americana.*) A tree of coarser growth and foliage than the European, and producing larger and lighter colored berries.

Mountain Ash, European. (*Sorbus Aucuparia.*) A fine tree, with dense and regular head, covered from mid-summer to winter with great clusters of bright scarlet berries.

Mountain Ash, Oak-Leaved. (*Sorbus Quercifolia.*) A hardy tree of fine pyramidal habit; foliage deeply lobed; bright green above and downy underneath; one of the finest lawn trees.

Mulberry, Downing's Everbearing. A beautiful tree for the lawn or street; bears an abundant supply of sweet, refreshing fruit for several weeks; berries are about one and one-half inches long. Color blue-black.

Mulberry, New American. (*Morus.*) One of the best; hardy; fruit excellent quality; ripe from June 15 to September 20.

Mulberry, Russian. (*Morus Tartarica.*) A very hardy rapid-growing, limber tree of great value, especially in the West; foliage abundant and said to be very desirable for silk worm culture; fruit good size and produced in large quantities.

Mulberry, White. (*Morus.*) This is a variety used most for feeding silk worms; it forms a large spreading tree.

Oak, Red. (*Quercus Rubra.*) Makes a tree of great height, 80 to 100 feet; a native of large size and rapid growth; leaves dark dull green, turning to orange and brown in autumn; acorns very large; a beautiful specimen tree for park and street planting.

Oak, American White. (*Quercus alba.*) One of the finest American trees, large size and spreading branches; leaves lobed, pale green above and glaucous beneath.

Peach, Double White-Flowered. (*Persica vulgaris fl. alba plena.*) Very ornamental. Flowers pure white and double; superb. Perfectly hardy.

Pecan. Not hardy in the north; one of the best and most profitable where it succeeds. Makes a very large, tall tree, producing its thin-shelled, delicious nuts in profusion.

Persimmon, American. (*Diospyros Virginiana.*) A native variety with round top head and spreading, often pendulous branches; foliage dark green and very dense, fruit over an inch in diameter, pale orange-yellow, with a whitish bloom; delicate flower; very astringent, until full ripe or after early frosts; makes a beautiful lawn tree.

Plane, Oriental. (*Platanus orientalis.*) A well-known tree. Extensively used for street and park planting, especially in cities where there is much smoke.

Poplar, Carolina. (*Populus Monolifera.*) Vigorous, healthy native tree of rapid growth, pyramidal in form, with large glossy leaves; valuable for park or street planting. Makes a fine spreading head if well cut back the first few seasons; succeeds everywhere.

Poplar, Lombardy. (*Populus fastigiata.*) A native of Europe. Remarkable for its erect growth and tall, spire-like form.

Plum, Purple-Leaved. (*Prunus Pissardi.*) Distinct and handsome little tree, covered with a mass of small white, single flowers in spring; later, with showy, pinkish purple leaves that deepen in color to the end of the season. A unique lawn ornament at all times of the year.

Plum, Double-Flowered. (*Prunus Triloba.*) A charming shrub of vigorous growth. Very early in spring, before its leaves

appear, the whole trees is decked in a fleecy cloud of very double light pink blossoms. Its effect on a still leafless landscape is very bright.

Thorn, Paul's Double Scarlet. (*Crataegus* var. *coccinea-flore pleno Paulii*.) Small tree, with spreading, spiny branches; very hardy and will thrive in any dry soil. Flowers are bright carmine red. Superior to any of its color.

Thorn, Double Pink. (*Crataegus* *Rosea flore pleno*.) Double pink or rose flowers, with white tips.

fiddle-shaped leaves of a light green color, and beautiful tulip-like flowers.

Walnut, Black. (*Juglans nigra*.) Another native species of great size and majestic habit. Bark very dark and deeply furrowed. Foliage beautiful, each leaf being composed of from thirteen to seventeen leaflets.

Walnut, English or Persian. (*Madeira Nut. Juglans regia*.) Native of Persia. Loftier and larger in its native country than our Butternut is with us. Nut oval and very fine.

Walnut, Japan. (*Cordiformis*.) A rapid grower, profuse bearer, nuts heart-shaped,



Carolina Poplar.

Thorn, Double White. (*Crataegus flore alba pleno*.) Has small, double white flowers. A highly ornamental variety on account of both foliage and flowers, making a striking contrast when planted with the double scarlet.

Tulip Tree or Whitewood. (*Liriodendron tulipifera*.) Magnificent native tree, of tall, pyramidal habit, with broad, glossy,

thin-shelled, kernels may be removed whole. Reproduces from seed.

Willow, Golden. (*Salix Vitellina aurea*.) Handsome tree. Conspicuous at all seasons, but particularly in winter on account of its yellow bark.

Willow, Laurel-Leaved. (*Salix pentandra syn. laurifolia*.) A fine ornamental tree with very large, shining leaves.



Evergreens Well Arranged.

Evergreens

HERE are Evergreens for every purpose in ornamental planting. They are among the hardiest trees, and will do well in the most exposed situations. Some striking color effects are obtained through the use of various kinds of Evergreens, thus rendering them of great service in an ornamental way.

Arbor Vitae, American. (*Thuja Occidentalis*.) Beautiful native tree commonly known as the white cedar; valuable for screens and hedges.

Arbor Vitae, Pyramidal. (*Thuja Occidentalis*, var. *pyramidalis*.) Is a densely branched variety, forming a perfect column; holds its shape without trimming or pruning; hardy and will succeed anywhere the American Vitae does. A very ornamental type for many kinds of planting.

Arbor Vitae, Siberian. (*Thuja Siberica*.) The best of all the genus for this country; exceedingly hardy, keeping color well in winter; growth compact and

pyramidal; makes an elegant lawn tree, of great value for ornament, screens and hedges.

Arbor Vitae, Tom Thumb. (*Thuja*.) A dwarf variety of the American Arbor Vitae, which originated on our grounds. Is remarkable for its slow growth and compact, symmetrical habit.

Cedar, Red. (*Juniperus Virginiana*.) Well-known American tree; varies much in habit and color of foliage, some being quite stiff, regular and conical, and others loose and irregular. It makes a fine ornamental hedge plant.

Balsam Fir. (*Abies balsamea*.) Very erect

regular pyramidal tree, with dark green sombre foliage. Grows rapidly and is very hardy.



Colorado Blue Spruce.

Juniper, Irish. (*Juniperus Hibernica*.) A distinct and beautiful variety, of erect, dense, conical outline, resembling a pillar of green; very desirable.

Pine, Austrian or Black. (*Pinus Austriaca*, syn. *nigricans*.) Tree remarkably robust, hardy and spreading; leaves long, stiff and dark green; growth rapid. The most valuable for this country.

Pine, Scotch, or Fir. (*Pinus sylvestris*.) A native of the British Islands. A fine, robust, rapid-growing tree, with stout, erect shoots, and silvery green foliage. Very hardy; valuable for shelter.

Pine, White. (*Pinus Strobus*.) The most ornamental of all our native Pines; foli-

age light, delicate or silvery green. Flourishes in the poorest light sandy soil. Very valuable.

Spruce, Norway. (*Abies Excelsa*.) Lofty, noble tree of perfect pyramidal habit, remarkably elegant and rich; as it gets age, has fine, graceful, and pendulous branches; it is exceedingly picturesque and beautiful. Very popular and deservedly so. One of the very best evergreens for hedges.

Spruce, Colorado Blue. (*Picea pungens glauca*.) One of the hardiest and most



Norway Spruce.

beautiful of all the Spruces; in form and habit similar to the White Spruce; foliage of a rich blue or sage color.

Weeping Trees

THESE are purely ornamental trees, having the peculiar habit of drooping branches. Most of the various forms have this character so strongly marked that it is necessary to graft them high above the ground on some tall-growing form, in order that the weeping habit may be best developed. Some charming effects can be obtained in the ornamental planting of the home ground by the judicious use of these remarkable trees. With many forms, particularly the weeping mulberry, the best effects are produced when the trees are regularly and severely pruned during the dormant period.

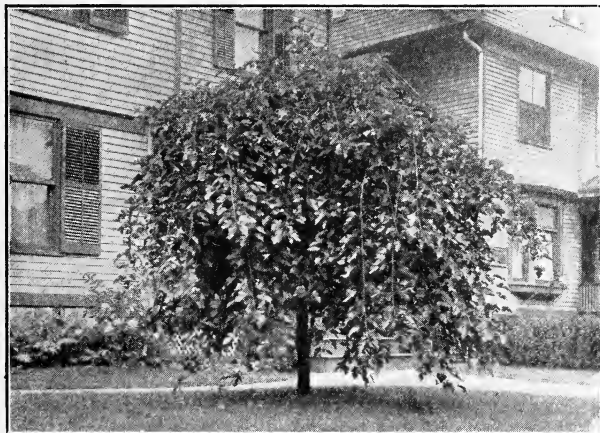
Beech, Weeping. (*Fagus* var. *pendula*.) A remarkably vigorous, picturesque tree of large size, and of wonderful grace and beauty.

Birch, Cut-Leaved Weeping. (*Betula* *alba*, var. *pendula laciniata*.) Undoubtedly one of the most popular of all weeping or pendulous trees. Its tall, slender, yet

dark green. A strong, vigorous grower. The finest Weeping Elm, and one of the best weeping trees.

Mountain Ash, Weeping. (*Pyrus* var. *pendula*.) Beautiful variety of rapid growth and decidedly pendulous and trailing habit. One of the most desirable lawn trees.

Mulberry, Tea's Weeping. (*Morus*.) The most graceful and hardy weeping tree in existence. Forms a perfect shaped head, with long, slender, and willowy branches, drooping to the ground. In light, airy gracefulness, delicacy of form and motion, it is without a rival. It has beautiful foliage, is hardy, safe and easy to transplant. Admirably adapted for small or large grounds, or for cemetery planting.



Weeping Mulberry.

vigorous growth, graceful drooping branches, silvery-white bark, and delicately cut foliage, present a combination of attractive characteristics rarely met with in a single tree.

Birch, Young's Weeping. (*Betula* *alba*, *pendula Youngii*.) Tree originated near Milfred, England, where it was found trailing on the ground. Grafted into stems at some height, it forms pendulous heads, drooping to the ground in fine thread-like shoots; very beautiful.

Elm, Camperdown, Weeping. (*Ulmus* *pendula*.) Vigorous, irregular branches have a uniform weeping habit, overlap so regularly that a compact, roof-like head is formed. Leaves are large, glossy,

green tint and long, wavy branches make it very attractive.

Willow, Kilmarnock Weeping. (*Salix Caprea pendula*.) Unique form and vigorous in all soils, this willow has been widely disseminated. It is usually grafted 5 to 7 feet high on stout stems and then forms a cone of glossy foliage.

Willow, American Weeping (*Salix Purpurea pendula*.) An American dwarf, slender branched species; grafted 5 or 6 feet high, it makes one of the most ornamental of small weeping trees; it is more hardy than the *Babylonica*.

Willow, Wisconsin Weeping. (*Salix dolorosa*.) A large tree with long, drooping branches, similar to the *Babylonica*, but much hardier.



Barberry Thunbergii as a Hedge.

Hedge Plants

Barberry, Purple-Leaved. (*Berberis*, var. *purpurea*.) An interesting shrub, growing 3 to 5 feet high, with violet purple foliage and fruit; blossoms and fruit beautiful; very effective in groups and masses or planted by itself.

Barberry, Thunberg's (*Berberis Thunbergii*.) From Japan. Pretty species, of dwarf habit, small foliage, changing to a beautiful coppery red in autumn. Valuable as an ornamental hedge.

Barberry, European. (*Berberis vulgaris*.) A fine shrub, with yellow flowers in drooping racemes produced in May or June, followed with orange-scarlet fruit.

Box, Dwarf. (*Buxus*, var. *nana*.) The well-known sort, used for edging.

Catalpa Speciosa. One of the most rapid growers. Valuable for timber, fence posts, railroad ties, etc., possessing wonderful durability. Large, heart-shaped, downy leaves and compound panicles of white flowers, tinged with violet and dotted with purple and yellow. Very ornamental and useful.

Quince, Japan. (*Cydonia Japonica*.) Very early in spring this fine old shrub is completely covered with dazzling scarlet

flowers, followed by small, quince-shaped fruits which are quite fragrant. Growth bushy and dense, with protecting thorns.

Locust, Honey. (*Gleditschia tricanthos*.) Makes a very strong and long-lived hedge; one of the best for turning stock. Plant 8 to 10 inches apart.

Locust, Black or Yellow. (*Robinia Pseudo-Acacia*.) Native tree of large size, rapid growth and valuable for timber as well as being ornamental; flowers large, yellowish white; very fragrant.

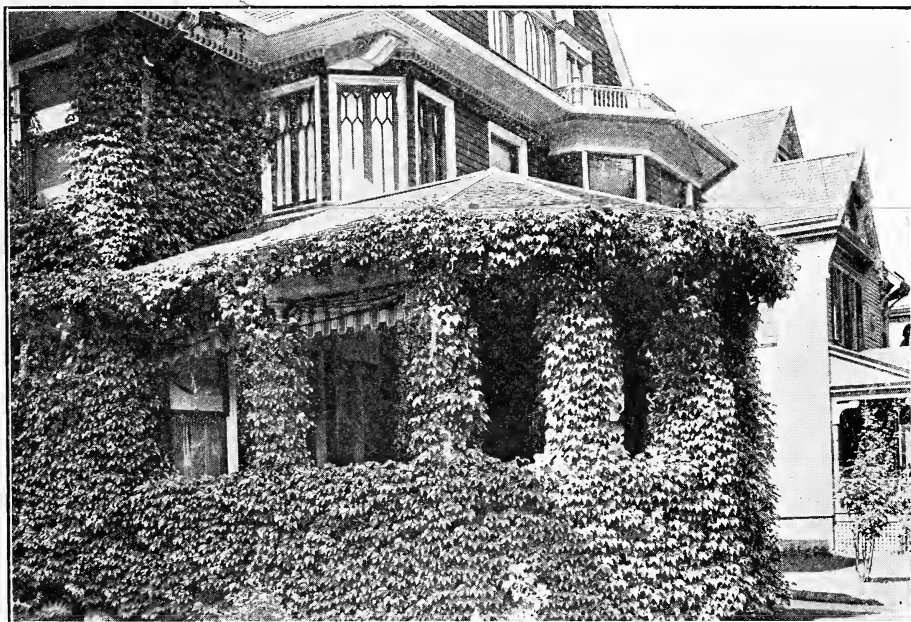
Osage Orange. (*Machura Aurantiaca*.) A native tree of medium size and spreading habit; leaves bright shining green, broad and sharp pointed; the fruit resembles an orange in size and color.

Privet, Amoor River. (*Ligustrum Amurense*.) A valuable ornamental shrub for hedges and borders; very hardy; foliage glossy green and holds its color almost the entire year; will stand shearing to any extent.

Privet, California. (*Ligustrum Ovalifolium*.) Well-known variety; vigorous, hardy; deep glossy green; useful for hedges and borders.

Ornamental Shrubs, Plants and Vines

AMONG the ornamentals in our nursery are some of the finest sorts in cultivation. These add a charm to the ornamental planting which is unequaled by annuals of short life. In the following list are plants for practically every situation. Every home needs ornamentals. There is nothing which can be done to a home, whether in the city or on the farm, which gives the passer-by a better opinion of the folks who live within, than an attractive grouping of ornamentals. An open lawn, bordered by a well selected assortment of ornamental shrubs and plants, adds materially to the value of the home grounds.



Ampelopsis Veitchii.

Achillea. Yarrow. One of the very best white flowered border plants, resembling Pompon Chrysanthemums. Erect and compact with full ball-shaped flowers; pure white.

Almond (Prunus), Double Rose Flowering. (*Japonica rubra fl. pl.*) A beautiful small shrub bearing in May, before the leaves appear; small, double rose-like flowers, closely set upon the twigs.

Althea, or Rose of Sharon. (*Hibiscus*.) Altheas are fine, free-growing flowering shrubs of very easy cultivation. Desirable on account of flowering in August and September, when nearly every other tree or shrub is out of bloom. Colors blue, pink, purple, red and white.

Althea, Variegated-Leaved Double Flowering. (*Hibiscus, flore pleno folia varie-*

gata.) A conspicuous variety with foliage finely marked with light yellow. Flowers double purple. One of the finest variegated-leaved shrubs.

Ampelopsis, Veitchii. (Japan Creeper, Boston Ivy.) Leaves overlap one another, form a dense sheet of green. It grows rapidly and clings to wall or fence with the tenacity of Ivy; the foliage is very handsome in summer, and changes to crimson scarlet in autumn. For covering walls, stumps of trees, rockeries and brick and stone structures, it can be specially recommended.

Anchusa, Italica. (Alkanet.) Dropmore variety. Fine species, with rough leaves and stems, and fine blue flower, 4 to 5 feet. June to August.

Anemone, Queen Charlotte. (Wind Flower.) Flowers very large, well formed, semi-double, and of a beautiful rosy flesh color on the upper side and of darker shade underneath. They are produced on strong stems in great profusion in autumn. The plant is vigorous, with large, luxuriant foliage and very ornamental.

Azalea, Ghent. (Pontica.) A splendid assortment of hybrids averaging a little larger in size and showing greater diversity of color shades than other Azaleas. Delightfully fragrant. Choice named varieties, well set with flower buds.

Azalea, Mollis. Great trusses of large flowers colored in many shades of red, yellow, white and orange. Fine bushy plants.

Anemone, Whirlwind. (Wind Flower.) Variety producing double white flowers in great profusion in autumn. One of the finest fall flowering perennials.

Aster, Cornflower. (*Stokesia cyanea*.) Grows 18 to 24 inches high, branches freely and is covered the whole season, from July to October, with fine, large, lavender-blue flowers, 4 to 5 inches across.

Bignonia. (See Trumpet Flower.)

Birthwort. (*Aristolochia, Siphon*.) An erect perennial plant with heart-shaped dark green leaves on long stalks; about six pipe-shaped flowers on stalk, at axils of leaves, yellow in color. Has long branching roots, much used by natives of south Europe as medicine.

Bleeding Heart. (*Dicentra*.) A hardy perennial, with heart-shaped, rose-colored flowers in drooping spikes. One of the best border plants; perfectly hardy and easily cultivated. Flowers in April or May.

Boston Ivy. (See *Ampelopsis Veitchii*.)

Box Tree. (*Buxus*.) Fine small evergreen with pale green leaves. Can be trained in any desirable form by shearing.

Caladium Esulentum. (Elephant's Ear.) For obtaining tropical effects in lawn and garden planting, this beautiful plant takes a prominent place. Grows well in any ordinary soil, but should have plenty of water and good rich soil to obtain best results. Bulbs must be taken up in fall and kept in a dry warm place.

Calycanthus, Sweet-Scented Shrub. (*Floridus*.) Native species with double purple flowers, very fragrant and the wood is also fragrant; foliage is a rich dark green; blooms in June, and at intervals afterward.

Cannas, Austria. (Giant, or Orchid-Flowered.) Blooms 6 inches in diameter; pure, clear, soft yellow; a magnificent flower; 6 feet.

Cannas, Beaute Poiteine. Bright, crimson scarlet. A splendid bedding Canna. 3½ to 4 feet.

Cannas, Italian Orchid-Flowered. A distinct race of Cannas. The flowers are very large, often 6 to 8 inches across, and gorgeous in color; are appropriately called Orchid-flowered. They have less substance and are thinner-petaled than the French varieties, and are exceedingly free bloomers.

Cannas, Rosea Unique. (French.) Charming variety of the everblooming French Cannas. Plants vigorous in growth, with lanceolate green leaves and beautiful, rose-colored flowers.

Cannas, Red. A handsome shade of deep, rich crimson, held erect on fine, well-built trusses, and strong stems. A constant bloomer.

Canna, Yellow. Color is yellow, spotted with red. A strong, vigorous grower, with fine green foliage. It blooms continually and is one of the finest varieties we offer.

Campanula, Bellflower. (*Hare-bell*.) A lovely, hardy little perennial, widely planted everywhere for its delicate sprays of drooping white bells and their delightful fragrance. The leaves are a rich dark green; the plant vigorous, soon forming fine clumps which bloom early in the spring.

Chrysanthemum, Early Flowering Varieties. While ordinarily not so large flowered as some of the later varieties, this class of Mums gives the best satisfaction for garden culture, and may be relied upon for bloom. Many of the later large flowered sorts do not reach perfection until after hard frosts. A large assortment of varieties on hand.

Cinnamon Vine, Chinese. (*Dioscorea Batatas*.) A beautiful, hardy, very fragrant, immensely rapid-growing vine; requires no attention and will continue to grow for years; one of the most valuable.

Clematis, Coccinea. Handsome bell-shaped flowers of a bright coral red color, from June until frost.

Clematis, Crispa. Bears an abundance of pretty, bell-shaped, fragrant, lavender flowers, with white center, from June until frost.

Clematis, Duchess of Edinburg. Fine, large, double white flowers; blooms freely.

Clematis, Flammula. Flowers small, white and sweet-scented; needs plenty of sun.

Clematis, Henryi. Flowers creamy white and very large. A free bloomer.

Clematis, Jackmani. Immense flowers of an intense violet purple color; bloom continually all summer.

Clematis, Madam Edouard Andre. Flowers are a beautiful shade of crimson; a free bloomer.

Clematis, Paniculata. Probably the most popular of the small flowering sorts; vine a rapid grower with glossy green foliage; in September the flowers appear in a perfect mass of white, giving the appearance of a bank of snow; the fragrance is most delicious and penetrating.

Clematis, Ramona. A vigorous grower and perpetual bloomer; flowers a deep, rich lavender.

Coral Berry. (*Symphoricarpos vulgaris*.) A shrub of very pretty habit. Foliage, flowers and fruit small; fruit purple; hangs all winter.

Coreopsis. (Thickseed.) Showy and valuable free flowering perennials. Produces bright golden yellow flowers in great profusion the entire season. June to September.

Cornus, Elegantissima Variegata. Grows 8 to 10 feet high, purplish-red branches and beautiful silver variegated foliage.

Cornus, Masculina. (Cornelian Cherry.) Tree-like shrub, producing early in spring, before the leaves appear, clusters of bright yellow flowers, which are followed by red, edible berries.

Cornus, Sanguinea. (Red-twigged Dogwood.) A strong-growing bush, with crimson colored branches; especially attractive in winter.

Cranberry, High Bush. (*Viburnum Opulus*.) Both ornamental and useful. Its red berries, resembling cranberries, es-

teemed by many, hang until destroyed by frost late in the fall.

Crocus. Among the earliest to blossom in the spring is this beautiful little flower, lifting its head almost before the snow has disappeared. Blooming at a time when the ground is destitute of foliage and flower, it is a welcome visitor. They present the best appearance, however,



Clematis Paniculata.

when grown in masses in a bed, for which large quantities should be used, say from 100 to 500 in a bed.

Currant, Flowering. (*Ribes*.) Vigorous, remarkably healthy plants, of easiest culture. Besides their ornamental foliage and flowers, the fruit of several of the sorts is showy and very attractive. Valuable for grouping as a class or with other shrubs.

Daisy, Shasta. (*Chrysanthemum leucanthemum hybridum*.) Large snowy white flowers, four inches across; in bloom all summer; a good cut-flower variety.

Dahlias. These showy and pretty flowers are becoming very popular and justly so. The Dahlia is one of the showiest of all fall flowers, commencing to flower in July, they are a perfect bloom until stopped by frost. Flowers are most perfect and of beautiful form. Dahlias are divided into classes as follows: Cactus, Decorative, Show, Fancy, Pompon, Single, Collarette and Seedling; each class is comprised of a number of different varieties. Colors numerous. Before freezing weather, dig and store in frost-proof cellar.

Day Lily. (Funkia.) A superb autumn flower, having broad, light green leaves, prettily veined, and long, trumpet-shaped, pure white flowers, that possess a delightful, though delicate fragrance.



Deutzia Pride of Rochester.

Delphinium. (Larkspur.) Hardy Larkspurs are one of the most important and most satisfactory plants in the herbaceous garden, and should be planted extensively, even in the smallest garden. Their long spikes of flowers are produced continuously from June until late in the fall, if the precaution is taken to remove the flower stems before they can produce seed.

Deutzia, Crenata. The beautiful white single flowered species that is a mass of bloom in June. Often preferred to the double sorts.

Deutzia, Gracilis. (Dwarf.) A low bush, three or four feet in diameter; flowers pure white and graceful. One of the prettiest and most popular small shrubs. Fine for winter forcing.

Deutzia, Hybridia Lemoinei. A hybrid obtained by Mons. Lemonie, of France, by crossing the well-known *Deutzia Gracilis* with *Deutzia Parviflora*. Flowers pure white, borne on stout branches, which are of upright growth. Habit dwarf and free flowering. A decided acquisition.

Deutzia, Pride of Rochester. A fine double variety, rather earlier than *D. Crenata*. Flowers pink in bud, white when fully expanded.

Digitalis. (Fox Glove.) An old-fashioned plant that furnishes a grand display of thimble-shaped flowers in immense spikes during July and August. Alba, Rosea, Lilac, Purple.

Dutchman's Pipe. (See Birthwort.)

Eleagnus Longipes. (Japan Oleaster.) In July the plants are covered with bright red berries of large size and edible, the flavor being pungent and agreeable. Laden with fruit the bush is highly ornamental, and the fact that the leaves remain fresh till late in the autumn gives it additional value for garden decoration.

Elder, Golden. (*Sambucus* var. *aurea*.) A handsome variety, with golden yellow foliage. A valuable plant for enlivening shrubberies. Requires full sunlight.

Eulalia, Gracillima, Univittata. Japan Rush. Narrow green leaves, with a silvery white midrib, perfectly hardy.

Filbert, English. Of easiest culture, growing 6 to 8 feet high; entirely hardy, and one of the most profitable and satisfactory nuts to grow, succeeding on almost all soils, bearing early and abundantly; nuts nearly round, rich and of excellent flavor, admired by all for the dessert.

Forsythia, Fortunei. (Golden Bell.) Growth upright, foliage deep green, flowers bright yellow.

Forsythia, Viridissima. A fine hardy shrub. Leaves and bark deep green, flowers deep yellow, very early in spring.

Fringe. (See Ornamental Trees.)

Garden Pinks. Without the spicy fragrance of the hardy pinks a garden is incomplete; and their perfect form and rich coloring make them great favorites for summer bouquets.

Gaillardia Grandiflora Superb. (Blanket Flower.) Makes one of the most gorgeous and prodigal displays of all perennials. Flowers often measure three inches in diameter, on clean two-foot stems. A hard center of deep maroon is thickly bordered by petals of orange and yellow, strikingly ringed by circles of crimson, red and maroon. Poor soil will do, and a constant show is assured from June until frost.

Gladiola, Crawford's Mixture. Fine assortment of varieties, beautifully marked, and a wide range of colors. This class of summer-flowering bulbs is doubly valuable for the brave field show of bloom, and for its generous supply of cut flowers.

Gladiola, Lemoine's New Butterfly Hybrids. Beautifully marked and spotted with colors of dazzling richness.

Golden Bell. (Forsythia.) Three splendid old shrubs, growing 8 to 10 feet tall eventually, light up the garden with glinting masses of yellow very early in spring before the leaves appear. Their bright golden flowers, often appearing before the snow is gone, vie with Crocus as harbingers of spring.

Golden Elder. (See Elder, Golden.)

Golden Glow. *Rudbeckia.* A distinct, tall growing, hardy perennial, from 6 to 7 feet high. Foliage deeply cut, handsome bright green; flowers very double, rich golden-yellow; 2 to 3 inches in diameter; borne on long, smooth stems, forming for the tall plant a solid head of bloom.

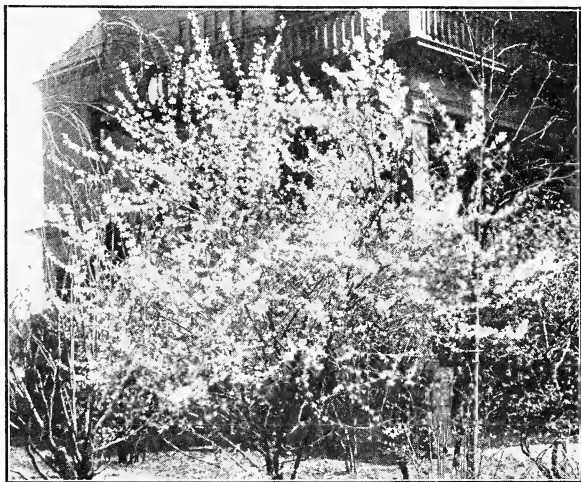
Heliotropes. Heliotropes are great favorites, principally on account of their delicious fragrance; they grow freely under glass, and may be planted in the open border during the summer.

Helianthus. (Sunflower.) One of the showiest of the hardy perennials. Flowers are large and vary in color from light to deep orange-yellow; stalks are tall and graceful. Indispensable for large

borders, woodland walks, etc., and especially where cut flowers are wanted in quantity.

Hibiscus, Crimson Eye. Immense flowers of purest white, with large centers of velvety crimson. Blooms very profusely, the plants being covered all summer with a wealth of most beautiful, attractive flowers.

Hollyhocks. Few hardy plants combine as many good qualities as the Hollyhock. For planting in rows or groups on the lawn, or for interspersing among shrubbery, they are invaluable. The flowers form perfect rosettes of the most lovely shades of yellow, crimson, rose, pink, orange, white, etc. The Hollyhock



Forsythia Bush.

requires a rich, deep soil, well drained and will repay in quality and elegance of bloom any extra care. A slight protection in the winter will be beneficial.

Honeysuckle, Hall's Japan. (*Lonicera Halliana.*) A strong, vigorous evergreen variety, with pure white flowers, changing yellow. Very fragrant. Covered with flowers from June to November.

Honeysuckle, Monthly Fragrant. (*Lonicera Belgica.*) Blossoms all summer; flowers red and yellow; very sweet. Rapid grower.

Honeysuckle, Tartarian. (*Lonicera Tartarica.*) Pink flowers, which contrast beautifully with the foliage. This and grandi-



Spirea Van Houttei.

flora appear to fine advantage planted together. June.

Honeysuckle, Scarlet Trumpet. (*Lonicera sempervirens.*) A strong grower and produces bright scarlet, inodorous flowers all summer.

Honeysuckle, Woodbine. (See Ivy, Americana.)

Honeysuckle, Chinese Twining. (*Lonicera Japonica*, or *L. Sinensis.*) A well-known vine, holding its foliage nearly all winter. Blooms in July and September; very sweet.

Honeysuckle, Yellow Trumpet. (*Lonicera Flava.*) A strong native vine, with brightest orange-yellow trumpet-shaped flowers.

Hydrangea, Arborescens Grandiflora. (Snowball Hydrangea.) This magnificent, perfectly hardy American shrub has snow-white blossoms of largest size. One of its most valuable characteristics is its coming into bloom just after the passing of all the early spring

shrubs, while its long flowering season from early June until late August, makes it a valuable acquisition in any garden.

Hydrangea, Paniculata grandiflora. This is one of the most valuable hardy shrubs. It attains a height of 3 to 4 feet, and is perfectly hardy in all parts of the country. The flowers are white, borne in immense panicles nearly a foot in length. It commences flowering in July and continues until November.

Hydrangea, Thos. Hogg. (Japanese or Garden Hydrangea.) One of the hardiest; well adapted to pot culture and outdoor cultivation; flowers pure white. A profuse bloomer.

Hydrangea, Paniculata Grandiflora. (Tree shape.) These are fine specimen plants, four or five feet high, trained to tree shape, with about three feet of straight stem and nice-shaped heads. Should bloom profusely the first year.

Hydrangea, Otaska. This is the variety that is used so extensively at the Atlan-

tic seashore resorts, producing immense heads of flowers, usually pink in color throughout the entire summer. We have a grand lot of plants especially prepared for summer flowering that will make a handsome display.

Hyacinths. (*Galtonia Candicans.*) Among all the bulbs used for winter flowers, the Hyacinth stands foremost. Flowers



Digitalis.

may be produced by placing the bulbs in a glass filled with water or placed in pots or boxes in soil; colors, blue, red, white, with various shades.

Iris, German. (*Germanica.*) This group blooms in May, with wonderful combinations of coloring; leaves broad sword-like. We have an assortment of the best sorts.

Iris, Japan. (*Kämpferi.*) The Japanese Iris should be planted in a somewhat cool, moist situation, and in rich soil. Its flowers, in late June and July, are quite distinct from those of all the varieties, and will compare favorably with some of the exotic orchids. We have a good assortment of the best varieties.

Ivy, Japan or Boston. (See *Ampelopsis Veitchii.*)

Ivy, American, or Virginia Creeper. (*Ampelopsis quinquefolia.*) One of the finest vines for covering walls, verandas, or trunks of trees; foliage green, turning to a rich, crimson in autumn; a rapid grower and quickly fastens to anything it touches.

Ivy, English. (*Hedera Helix.*) A hardy, evergreen climbing vine, with dark, glossy green leaves. Much used for covering walls of churches, etc., and for cemetery work. Is a true evergreen; retains its bright green leaves all winter.

Jonquils. A species of *Narcissus*, native of Spain, easily grown in house or garden and always a favorite for its bright yellow, deliciously fragrant flowers, which are produced in abundance. They are very fashionable and popular as cut flowers, and can be successfully grown by everyone. Well suited for window plants.

Kerria Japonica. (*Globe Flower.*) A slender green-branched shrub, 5 to 6 feet high, with globe-shaped yellow flowers from July to October; very ornamental.

Larkspur. (*Delphinium.*) The hardy Larkspurs are one of the most important and most satisfactory plants in the herbaceous garden, and should be planted extensively, even in the smallest garden. Their long spikes of flowers are produced continuously from June until late in the fall, if the precaution is taken to remove the flower stems before they can produce seed.

Japan Quince. (*Cydonia Japonica.*) A beautiful flowering shrub, suitable for hedges, thorny enough to form a good defense; flowers a bright scarlet-crimson in great profusion in the early spring.

Lilac (*Syringa*)

Blue Lilac. Flowers bluish-purple

Pink Lilac. Rosy pink blossoms.

Purple Lilac. (*S. Vulgaris.*) The well-known purple variety; always a standard sort.

Red Lilac. (*S. Vulgaris rubra.*) Flowers a reddish-violet color.

White Lilac. (*S. Vulgaris alba.*) Too well known to need description; flowers white and fragrant.

Charles X. A strong, rapid-growing variety, with large, shining leaves; trusses large, rather loose, reddish purple.

Frau Dammann. Immense trusses, pure white, medium sized single flowers.

Ludwig Spaeth. Panicle long; individual flowers large, single; dark purplish red; distinct; superb.

Marie LeGraye. Large panicles of white flowers; the finest white lilac.



Lilac.

Persian Lilac. (*Persica*.) From 4 to 6 feet high, with small foliage and bright purple flowers.

Michael-Buchner. Clear lilac; double; pale lilac.

President Grevy. A beautiful blue; individual, flowers very double and very large, measuring three-quarters of an inch in diameter; the panicle is magnificent and measures 11 inches in length and 5 inches across. One of the finest Lilacs.

Villosa. Dwarf growth, broad leaved; pinkish lilac flowers in long, loose panicles.

Lilies (*Lilium*)

Auratum. (Gold-Banded Lily of Japan.) Flowers very large, of a delicate ivory-white color, thickly dotted with rich

chocolate crimson spots, with a bright golden band through the center of each petal. The finest of all Lilies.

Candidum. (Easter Lily.) The old-fashioned pure white garden lily. One of the hardiest. Should be planted early in the fall.

Elegans. (Bicolor.) A beautiful combination of yellow and red. July.

Longiflorum. A well-known variety, with snow-white trumpet-shaped flowers that are very fragrant. It is quite hardy and blooms freely in the open ground in June and July.

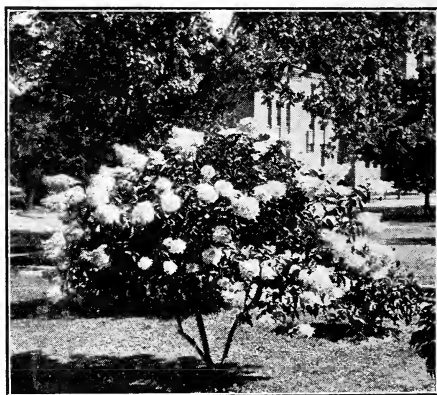
Speciosum Album. (Japan Lily.) Large white flowers of great substance, with a greenish band running through the center of each petal.

Lily of the Valley. (*Convallaria majalis*.) Large, luxuriant foliage; flowers small, bell-shaped, in pretty racemes, and very fragrant.

Speciosum Rubrum. White, heavily spotted with rich crimson spots.

Speciosum Melpomeme. Flowers large and abundant; rich blood-crimson, heavily-spotted.

Tigrinum fl. pl. (Double Tiger Lily.) Color orange-scarlet, with dark spots.



Hydrangea P. G. Tree Form.

Lonicera. (See Honeysuckle.)

Matrimony Vine. (*Lycium Sinensis*.) A

creeping or trailing vine; foliage a grayish-green; flowers appear in June and continue blooming until September; color varies from pink to purple; fruits are a bright crimson and make a beautiful contrast with the green foliage; valuable for trellises and fences.

Monarda Didyma. (Bergamot.) A bushy, coarse-leaved plant, growing about two feet high; covered with round, full heads of red flowers with a petalage similar to the Cactus Dahlias.

Narcissus. Some varieties bloom as early as the Crocus. The flowers assume many forms and present many charming combinations of white, gold, primrose, orange, sulphur and pure yellow. Some are quite fragrant; all are very hardy, except the clustered Polyanthus. Double and single.

Pampus Grass. (Gynerium Argenteum.) One of the most effective. Its silvery plumes are produced on stems 8 to 10 feet high. Well established plants can remain in the open ground if protected.

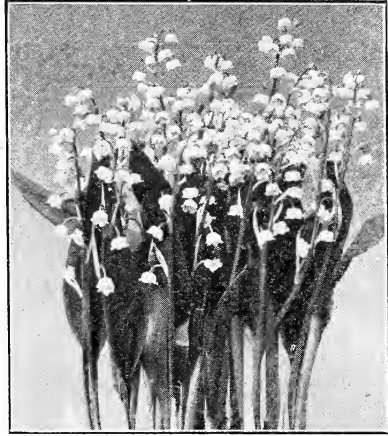


Herbaceous Peonies.

Paeonies (Herbaceous)

Paeonies are among the most showy and useful of hardy plants. They are all hardy and admirably adapted to the climate of our most northern states, grow-

ing well in almost any situation or soil. We offer a splendid assortment.



Lily of the Valley.

Delacheii. Tall, immense heads of crimson-maroon.

Duke of Wellington. Large cones of creamy white; bluish guards.

Festiva. Large, full, double, rose type. Creamy white, with crimson spots in the center.

Festiva Maxima. About the largest and undoubtedly the most popular Paeonia of them all. High built flowers borne on long, stiff stems; the purest white inner petals slightly tipped carmine.

Fringed Leaved. (Tenuifolia flore pleno.) Deeply cut fringe-like foliage.

Grandiflora Rosea. Full, globular rose type. Guards light solierino-red, center petals lighter, shaded salmon. Fragrant, tall; strong grower. Mid-season.

Lady Bramwall. Light pink, very fine bloom.

Louis Van Houtte. Dark crimson, very compact, one of the best of its color.

Officinalis Rubra fl. pl. Rich, deep crimson, very early; one of the best dark colored varieties.



Hardy Phlox.

Queen Victoria. The broad guard petals are a pretty blush-white; center white, slightly edged pink.

Rosea Plenissima Superba. A superior double red sort, full centered and massive; bright crimson.

Tree Pæonies. These differ from the Herbaceous Pæonies by forming a dwarf shrub, that in time reaches a height of 3 or 4 feet. The flowers are extremely large and of the most delicate shades. They bloom about three weeks earlier than the *Chinensis* section. They are perfectly hardy, but the buds, which develop very early should be protected from severe freezing in late spring. Red, white and pink.

Hardy Phlox

Amazone. Large flower; pure white; fine.

Athis. A very strong and vigorous pink.

Beividere. Bright, lively, early pink.

Chameleon. Varies from rosy-scarlet to deep rose.

Charlotte Saisson. White, suffused crimson; tall.

Coquelicot. Pure scarlet, with crimson eye.

Diplomat. Large, lilac, with crimson eye.

Etna. The best tall crimson double.

Independence. Tall, fine, pure white.

Iris. Purple blue.

Jacinda. Large lavender.

Lothair. Bright, dazzling crimson.

Maculata. This is a grand acquisition to the Hardy Phlox. No collection is complete without it; tall, bright rosy-crimson, one of the showiest for permanent borders, glossy foliage, always clean and bright; should be in every collection.

Pantheon. Rosy-salmon; very large.

Poppy, Oriental. These gorgeous, brilliant poppies bloom during May and June, and in their season no other flower can equal them in dazzling beauty. The blooms are freely produced on strong

stems and are much more durable than the annual poppies. Mixed colors.

Privet, Amoor River. (*Ligustrum Amurense*.) A valuable ornamental shrub for hedges and borders; very hardy; foliage glossy green and holds its color almost the entire year; will stand shearing to any extent.

Privet, Ibota. Spreading and tall growing, the hardiest of the group. Color grayish-green; fruits black.

Rhododendron. (*Rosebay*.) The Rhododendrons are magnificent Evergreen shrubs, producing beautiful masses of flowers in various colors. Should not be planted in soil containing limestone or heavy clay, as they will not succeed; where this exists, beds of especially prepared soil should be made. We can furnish the leading hardy varieties in both grafted and seedling stock. Pink, Purple, Red and White.

Rudbeckia. (See Golden Glow.)

Rose of Sharon. (See *Althea*.)

Salvia. Splendens. One of the finest of all bedding plants, being completely covered in Autumn with long spikes of dazzling scarlet flowers, remaining in bloom until cut down by frost.

Snow Drops. The first flower of spring is the delicate Snow Drop, white as snow. Plant in the fall, in beds or masses of a dozen or more, about one inch apart and three inches deep. Desirable for growing in pots, etc., in the house in winter. A few planted on the lawn produces a fine effect early in the spring before the grass will need cutting. Perfectly hardy and bulbs can remain several years without removing.

Snow Ball, Common. (*Viburnum Opulus Sterilis*.) An old and well-known shrub bearing large balls of pure white flowers.

Snow Ball, Japan. (*Viburnum Plicatum*.) Foliage a handsome olive-green; flowers are larger and more white than the Common Snow Ball; borne in dense heads; very ornamental.

Snowberry. (*Symphoricarpos Racemosus*.) Flowers inconspicuous, rose colored, in June and July; leaves thin, dark green, fruit large, milk-white, clustered; persistent until late in winter.

Sambucus Aurea. (See Golden Elder.)

Spireas (Meadow Sweet)

An indispensable class of small to medium-sized shrubs, embracing a wide range of foliage, habit of growth, color of flowers and season of blooming. All of easiest culture in all soils.

Anthony Waterer. A new crimson-flowered variety; one of the most beautiful of dwarf flowering shrubs. It makes a low, compact bush, 15 to 18 inches high, and is covered nearly the whole growing season with large umbels of deep crimson flowers. Perfectly hardy, it makes a fine, compact plant for low clumps or for bedding purposes. Grown as a pot plant, it is a fine plant for house decoration.

Arguta. Of dwarf habit; flowers clear white. Very early flowering. Early May.

Aurea. Golden-Leaved Nine Bark. An interesting variety, with golden-yellow tinted foliage, and double white flowers in June. Very conspicuous.

Billardii. Medium-sized shrub, producing spiked panicles of flowers; bright rose color.

Bumalda. A spreading, low bush, with dark leaves, brightened by corymbs of pretty, light pink flowers in May, and at intervals all summer.

Callosa. (*Fortune's Spirea*.) Has large panicles of deep rosy blossoms; grows freely and blooms nearly all summer; fine.

Douglassi. A beautiful variety with spikes of deep rose-colored flowers in July and August.

Golden. (See *Spirea Aurea*.)

Prunifolia flore pleno. Double-Flowered, Plum-Leaved Spirea. A beautiful shrub from Japan, with pure white flowers, like white daisies, in May. Keeps in flower a long time and justly merits to be placed in the front rank among flowering shrubs.

Reevesii fl. pl. Lance-Leaved Double. A perfect gem, each individual flower double and very conspicuous.

Thunbergii. Thunberg's Spirea. Of dwarf habit, rounded, graceful form; branches slender and somewhat drooping; foliage narrow and yellowish green; flowers small, white, appearing early in spring, being one of the first Spireas to flower. Esteemed on account of its neat, graceful habit.

Van Houttei. The grandest of all the Spireas. It is a beautiful ornament for the lawn at any season, but when in flower it is a complete fountain of white bloom, the foliage hardly showing. Clusters of twenty to thirty flat, white florets make up the racemes. Perfectly hardy and an early bloomer.

Strawberry Tree. (*Euonymus Alatus*.) Dwarf, compact habit; wood very corky; leaves small, fruit red. Foliage turns bright red in fall. One of the very finest shrubs for autumn effect.

Sumach, Cut-Leaved. (*R. Glabra*, var. *laciniata*.) A variety of the Smooth Sumach, with deeply cut, fern-like foliage.

Sweet William. (*Dianthus barbatus*.) Among the most esteemed and valuable hardy plants, producing flowers of a great variety of colors. Mixed colors.

Syringa or Mock Orange (Philadelphia)

For grouping with other shrubs, forming large screens or hedges which may not require pruning, or used as single specimen lawn plants, they are desirable. They will bear heavy pruning and quickly resume their free, semi-pendulous, picturesque effect.

Coronarius. (Garland Mock Orange.) This is the popular tall variety; very sweet and one of the first to flower.

Golden. (*Foliis aureus*.) A striking shrub of medium growth, with golden-yellow foliage throughout the season. Indispensable for yellow contrastive grouping.

Gordonianus. (Gordon's Syringa.) Vigorous grower and profuse bloomer; flowers slightly fragrant; late bloomer.

Grandiflorus. Large Flowering. Has showy large flowers, slightly fragrant; branches somewhat straggling.

Lemoinei Erectus. A charming variety of upright growth; flowers small, yellowish white, fragrant, completely covering the plant.

Tamarix. (Tamarisk.) These are very beautiful shrubs, with small leaves, somewhat like those of the Juniper, and delicate small flowers in spikes. They are invaluable for planting by the seaside, where scarcely anything else will grow.

Trumpet Flower. (*Bignonia Tecoma Radicans*.) A robust woody vine twining with numerous roots along its stems. Large trumpet-shaped scarlet flowers clustering at the tip of the branches. Leaves light green.

Tritoma, Pfitzerii. A grand improvement on *Tritoma Uvaria Grandiflora*. The spikes, which are produced with considerable more freedom than in the old variety, are of gigantic size, frequently 4½ feet high, and with heads of bloom over 12 inches long, of a rich orange-scarlet, shading to salmon-rose on the edge; first-class acquisition.

Tuberoses. One of the most delightfully fragrant and beautiful of the summer-flowering bulbs. For outdoor planting set bulbs about May 10th to 15th, after danger of frost is over.

Tulips. These are the most glowingly brilliant and effective of all the early spring flowers. Plant them thickly and lavishly in the fall, and they will reward you with abundant cheer during the cold, dull months of early spring. Colors many. Double and single.

Viburnum. (See Snowball.)

Virginia Creeper. (See Ivy, American.)

Weigelia (Diervilla)

Candida. Of vigorous habit, flowers pure white and produced in great profusion in June and continue to bloom at intervals through the summer.

Amabilis. A fine pink flowering variety. One of the best.

Eva Rathke. A charming new Weigelia; flowers brilliant crimson; a beautiful, distinct, clear shade.

Floribunda. A fine variety; flowers dark red. A profuse bloomer.

Rosea. One of the most popular shrubs known. Flowers bright rose.

Variegata. (*Nana*.) Of dwarf habit and clearly defined and silvery-variegated leaves; flowers rose colored.

Wistaria, Chinese Purple. (*W. Sinensis*.) One of the best of the Wistarias, rapid growing and elegant, attaining 15 to 20 feet in a season; flowers a pale blue, borne in long, pendulous clusters in May and June.

Wistaria, Chinese White. (*W. Sinensis* var. *Alba*.) Same as Chinese Purple, except the flowers are pure white; very beautiful variety.

Woodbine. (See Ivy, American.)

Yucca, Filamentosa. (Adam's Needle) Among hardy ornamental foliage and flowering plants this can be classed at the head of the list. Its broad, sword-like foliage and tall branched spikes of large, fragrant, drooping, creamy white flowers make it an effective plant for all positions; 5 to 6 feet high.



A Rose Garden.

Roses

The beauty of the Rose appeals to more people than any other flower. It succeeds best in a deep, rich soil, rather moist, and of somewhat clayey nature. **There are more failures in growing the Rose from not making the soil rich enough than from any other cause.** Perhaps the best line of treatment is to dig 18 or 20 inches deep, working in fine, rotten cow manure and leaf-mould to the full depth, and every fall banking rich stable manure up against each plant for protection. In the spring this should be spread over the bed and spaded in.

Winter Protection—Most Roses will be much benefited by tying the bush up with coarse rye straw. Pine boughs or leaves, packed in about the plants, are a great protection.

Our Hardy Roses (the "H. P.," the "C.," and the "M."), are strong plants, grown out of doors, well rooted, and every way desirable. They have usually bloomed in the nursery row before being sent out, and are in every respect much better and stronger plants than the ones that are advertised as being so cheap, and are sent out by mail, those being small, tender shoots, started in a greenhouse, and, after a few weeks, sent out before they have established growth and constitution enough to stand the shock of transplanting. While for plants of this older age, grown and cultivated outdoors in the nursery rows, we have to charge our price; they are more than worth the difference, and will give much better results and satisfaction.

H. P.—In our list the term (H. P.) denotes the hardy and popular classes mainly, called **Hybrid Perpetuals**. They usually bloom profusely during June, and occasionally during the summer and autumn. In pruning, the work may be done in the fall or in March, the latter time being generally preferred. The bushes should be so pruned as to obtain a limited number of as strong canes as possible, as the stronger the canes, the larger will be the flowers. Weak shoots should be entirely removed or severely cut back. The two hardy yellow Roses, Harrison's and Persian, are quite similar to the H. P. class, in their strong hardy growth. **All suitable for the garden or lawn.**

C.—The **Climbing Roses** are hardy, and should be planted outdoors. They bloom profusely during June and some kinds during the summer. **Valuable for trellises, porches, etc.**

M.—The **Mosses** are very hardy and fragrant. On account of the beautiful buds for bouquets and cut flowers, a favorite class with all. Mainly June bloomers, although some kinds bloom during the summer. The buds have mossy covering on the outer leaves. **Require close pruning. Suitable for garden and lawn.**

T.—The **tender list**, marked (T.) includes a variety of classes, which require protection during the winter. In most sections plenty of leaves, with evergreen boughs on top, are sufficient. **Appropriate for beds in the lawn and for pot culture in the house.** They are profuse bloomers.

Budded Roses should be planted sufficiently deep so that the junction of the bud with the stock is from 2 to 3 inches below the surface of the earth.

We cannot too forcibly direct attention to the above rule.

For the convenience of the customer in making selections, we print the common everyday classification of Red Rose, Pink Rose, White Rose, etc., directly after the name of the Rose. The more complete color description is also given.

Agrippina. T. Red. An old favorite; brilliant, fiery red, a good bedder.

Alfred Colomb. H. P. Red. Bright, clear cherry-red, shaded with crimson; globular, full and very sweet.

American Beauty. H. P. Red. Large globular; deep pink, shaded with carmine; delicious odor, especially desirable for forcing.

Anne de Diesbach. H. P. Red. Carmine; a beautiful shade, very large. A superior garden sort; fragrant; one of the hardiest. Is valuable for forcing.

Baby Dorothy. (Baby Rambler, Pink.) Beautiful bright pink, blooms incessantly.

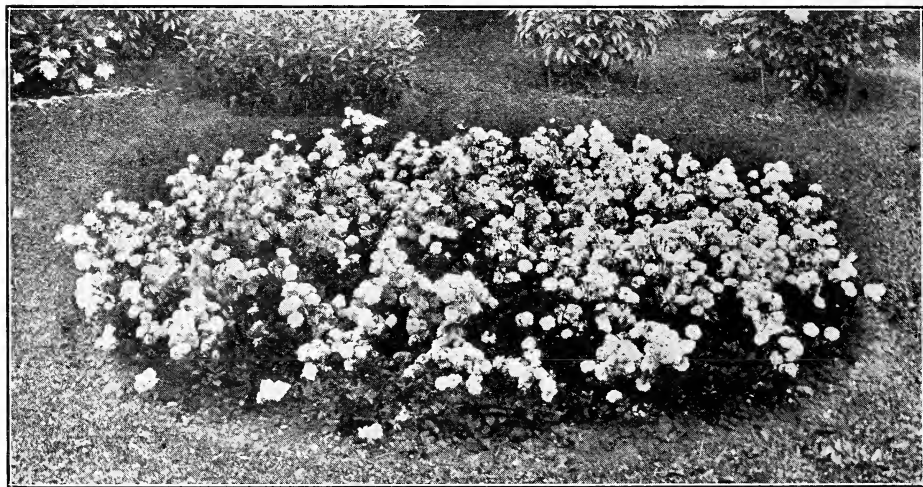
Baby Rambler, Red. (Madame Norbert Levavasseur.) Grows 18 to 24 inches. The flowers are borne in clusters of 20,

fully scented; free bloomer, and of hardy and vigorous habit.

Black Beauty. H. P. Dark Red. One of the darkest roses in the world. The plant is a healthy vigorous grower. Perfectly hardy. The color is a rich brilliant red, passing to velvety fiery-red. One of the very brightest colored roses we have. The flowers are very double and produce in great profusion. Very showy and handsome. Beautiful in the bud as well as when fully matured and highly fragrant.

Bride. T. White. One of the very best pure white ever-blooming roses; extra large buds and flowers; pure creamy white, sometimes tinted blush; early and constant bloomer.

Blue Rambler. (C). A new rose from Holland that originated from Crimson



A Bed of Baby Ramblers.

30 or more, in every way resembling the blossoms of the Climbing Crimson Rambler. Always in bloom.

Baby Rambler, White. Each branch bears from 15 to 50 little creamy-white flowers.

Baltimore Belle. C. White. Pale blush, becoming nearly white; compact and fine.

Baroness Rothschild. H. P. Pink. A superb rose, of pale, satiny-rose; very large and hardy; late bloomer.

Baron de Bonstetten. H. P. Dark Red. Extra large flowers, very solid, round and full; dark rich crimson, delight-

Rambler. It bears semi-double flowers of medium size, in large bunches. The originators describe color as "reddish or rosy lilac when opening, changing to amethyst or metallic blue." Thoroughly hardy and a vigorous tall-growing climber.

Catherine Mermet. T. Pink. Extra fine; light rose color; a vigorous grower. Large double and very fragrant.

Caprice. H. P. Pink. Soft pink, striped carmine; an old variegation, which makes a very attractive modification of the plain colors.

Caroline Marniesse. H. P. White. (Noisettes). Creamy-white, flowers small and

full, and borne in very pretty clusters; an exceedingly free bloomer; low-growing (18 inches) and especially desirable for the border of a bed; entirely hardy.

Climbing American Beauty. C. Red. New. This variety retains the deep pink to crimson color and the same delightful fragrance of the famous Ameri-



Gruss an Teplitz.

can Beauty bush rose. It blooms very freely and is noted for its fine foliage.

Crimson Rambler. C. Red. The well-known rose, of which there have probably been more planted than any one-half dozen other varieties put together. Strong grower, flowers in panicles of 30 to 40 blooms, color bright vivid crimson.

Clio. H. P. Light Pink. Flesh color, shaded in the center with rosy pink; large and of fine form.

Clothilde Soupert. Medium size; very double and beautifully imbricated like an aster, produced in clusters; partly white, with rosy lake centers, liable to vary, producing often red and white flowers on same plant.

Coquette des Alps. H. P. White. Elegant large flowers; pure milk-white, faintly tinged with rose; great bloomer.

Crested Moss. M. Pink. Deep pink buds, surrounded with a mossy fringe and crest; fragrant; one of the best.

Dorothy Perkins. P. Pink. Has the same strong habit of growth as the Crimson Rambler. The flowers are borne in large clusters and are a beautiful shell pink, of medium size and very double. A valuable new climbing rose.

Earl of Dufferin. H. P. Dark Red. A strong, healthy growing sort, and splendid autumn bloomer; flowers are large, very full and finely formed; color deep, velvety crimson, shaded with maroon.

Fisher Holmes. H. P. Red. Deep glowing crimson; large, moderately full and fine form.

Flower of Fairfield. C. Red. A sport from the notable Crimson Rambler, which it resembles in every respect, but the first blooms continue longer, and it also blooms at intervals until frost.

Francois Levet. H. P. Red. An unusually strong and vigorous grower and very free bloomer; large, round, stately flowers. Color bright rosy crimson; very fragrant and exceedingly beautiful.

Frau Karl Druschki. H. P. White. (Snow Queen.) Very large, perfect form and snow white; long, pointed buds; a vigorous grower and free bloomer. The best hybrid perpetual yet introduced.

General Jacqueminot. H. P. Red. Brilliant crimson scarlet; very showy and effective; good grower, free bloomer; one of the most popular roses. Especially valued for its large and elegant buds.

Gloire de Dijon. Tea. Buff, orange center; very large and double. The first to flower and keeps on to the very last.



General Jacqueminot.

The hardiest of all the Tea Roses, requiring but slight protection in the middle states.

Gruss an Teplitz. T. Red. This is a Rose for everybody, succeeding under

the most ordinary conditions. Its color is of the richest scarlet, shading to a velvety crimson; very fragrant, a free, strong grower and in bloom all the time.

Harrison's Yellow. Austrian Briar. Bright, clear golden yellow; entirely hardy. Grows 3 to 4 feet high, and is fine for planting in groups or with hardy shrubs.

John Hopper. H. P. Red. Deep rose, with crimson; semi-globular, free bloomer. One of the best.

Killarney. T. Pink. One of the most beautiful roses grown; strong, vigorous, perfectly hardy and in every way a rose that should be more cultivated; flowers are very large. Buds long and pointed. Color a brilliant shining pink; one of the best Tea varieties.

Lady Gay. C. Pink. A most desirable variety, remarkably vigorous growth, with

freely in clusters at intervals throughout the summer.

Madame Gabriel Luizet. H. P. Pink. Pale pink; a delicate and beautiful tint; large and full, cupped, very sweet. Known as Hardy La France, which it resembles.

Marshall P. Wilder. H. P. Red. One of the best dark red hybrid perpetuals; the flowers are large and perfect in form, on good length of stems, making them very desirable for cut flowers; color bright cherry red, changing to crimson.

Memorial Rose. (Wichuriana.) From Japan; it is a low trailing species, its stems creeping on the earth almost as closely as the Ivy. The flowers are pure white, $1\frac{1}{2}$ to 2 inches across, with yellow stamens, and having a strong fragrance. It is quite hardy. This variety has proved valuable as a covering for banks, rockeries, etc., and for use in cemeteries

Moss Perpetual, Red. Fine rosy-red; large, full and globular; fragrant and mossy

Moss Perpetual, White. Pure white with a nicely pointed burr. One of the most beautiful white varieties.

Madam Plantier. H. P. White. Strong, vigorous grower and a profuse bloomer; one of the finest pure white roses, blooming in clusters. Blooms in the spring.

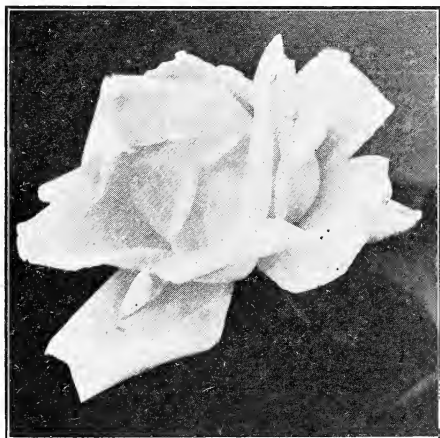
Magna Charta. H. P. Pink. Bright pink, suffused with carmine; a beautiful rose; strong, vigorous grower. Very large, full and fragrant.

Maman Cochet. T. Pink. This is our favorite rose. It is of the largest size, the flower is built up or rounded and very double; the color is a deep, rosy pink, the inner side of the petals being a silvery rose, shaded and touched with golden yellow. Very vigorous; deliciously fragrant.

Margaret Dickson. H. P. White. One of the choicest of the June Roses with flowers nearly as large as Paul Neyron. Pure, waxy, unblemished white.

Marchal Neil. C. T. Yellow. This variety is well known and considered to be one of the most magnificent Roses in existence. Flowers are pure, deep yellow, and its fragrance delicious. This is the most popular ever-blooming climbing rose in existence. It is not hardy in the north.

Mrs. John Lang. H. P. Pink. One of the finest roses. Large and of fine form; produced on long stems; exceedingly fragrant and a continuous bloomer; color soft pink. Free flowering, commencing



Frau Karl Druschki.

flowers of a delicate cerise pink, passing to soft-tinted pink.

La France. T. Light Pink. One of the most popular roses in cultivation; both buds and flowers are of lovely form and grand size; exceedingly sweet; colors range from a rosy flesh pink, red, yellow and white. One of the loveliest and most beautiful of all roses.

Madame Caroline Testout. T. Pink. One of the most popular and valuable bedding varieties; large, full, globular flowers of bright satiny-rose, with brighter center, very free and fragrant.

Madame G. Bruant. (Rugosa White.) In the bud-state the flowers are long and pointed, when open, and semi-double; pure white and fragrant, and produced

to bloom early in season and continues until late autumn.

Paul Neyron. H. P. Deep pink, one of the most desirable garden roses known; also considered the largest; color a deep rose-pink; very fragrant; hardy and a strong grower.

Papa Gontier. T. Red. Very large, rich rosy-red, full and sweet. A strong grower and constant bloomer. A fine rose for all purposes.

Perle des Jardins. T. Yellow. One of the most beautiful deep yellow roses in cultivation; flowers extra large, very double and fragrant; color a pure rich golden-yellow.

Persian Yellow. Perfectly hardy. Flowers double, full and deep golden yellow in color; blooms very freely in June; finest hardy yellow Rose grown. Strong two-year-old plants.

Philadelphica Rambler. C. Red. Flowers are $2\frac{1}{2}$ inches across, perfectly double, completely covering the bush. The color is pure, deep, rich crimson, brighter, and more intense than the old variety.

Pink Rambler. C. Pink. Flowers are double, of a clear shell pink; borne in large clusters; a valuable rose for cutting.

Pius IX. H. P. Pink. Deep rose, tinged with carmine; large and full; robust grower.

Prince Camille de Rohan. H. P. Dark Red. Deep velvety crimson; large, moderately full. One of the darkest roses.

Queen of the Prairie. C. Red. A rapid climber; flowers are very large; a bright rosy-red, changing lighter as the flowers open; strong and vigorous; compact and globular.

Rosa Wichuriana. (See Memorial Rose.)

Rugosa Alba. Came from Japan. Single, pure white flowers of five petals and highly scented, followed by pretty berries.

Rugosa Rubra. Another from Japan. Flowers a beautiful bright rosy crimson and single, succeeded by large berries of rich, rosy-red. Exceedingly ornamental.

Salet. M. Red. A bright light rose, large and full. It sometimes blooms in the autumn. A vigorous grower and perpetual bloomer. True perpetual moss, June to November.

Snow Queen. (See Frau Karl Druschki.)

Soliel d'Or. (Sun of Gold.) A strong, hardy rose; large, full and double; golden orange-yellow, tinged with red and rosy-pink; a magnificent rose.

Souvenir de la Malmaison. T. Light Pink. Queen of beauty and fragrance. The color is lovely, creamy flesh, with rose center, elegantly shaded. The flowers are large, perfectly double and deliciously sweet.

Tausendschon or Thousand Beauties. C. Cannot be too highly recommended on account of its free flowering qualities and beautiful white and delicate pink blossoms. It has already been recognized by the leading florists, and is grown in large quantities now for winter forcing, and for garden decoration it cannot be surpassed.

Ulrich Brunner. H. P. Red. Brilliant cherry red, a very effective color; flowers of fine form and finish, carried well upon the plant; petals of great substance; plant vigorous, hardy and resists mildew. One of the best varieties for forcing and open air culture.

White Rambler. (Thalia.) C. White. In habit of growth, foliage, manner of blooming and shape, flower is identical with Crimson Rambler, differing only in color, which is pure clear white. Blooms in clusters; vigorous grower.

Yellow Rambler. (Aglaiia.) C. Yellow. A hardy, yellow climbing rose, blooming after the same manner as the Crimson Rambler, in large clusters; flowers of medium size, very sweet scented. Color a clear, decided yellow; a rampant grower, strong plant; in full bloom makes one of the finest pillar or porch plants imaginable.

Tree Roses

The Tree Rose is grafted on hardy stems four to five feet high, and thus form tree shapes. When in bloom they are very handsome. As these trees are imported annually we can only make spring deliveries. We offer an assortment of white, red, pink, yellow varieties.

Crimson Rambler Tree Roses. A most attractive novelty in hardy Roses. Budded on strong, straight stems four feet high; the round bushy Baby Rambler tops at all times a perfect mass of crimson bloom. The most florescent of all Tree Roses.

General Instructions for Transplanting and Managing Fruit Trees

1. PREPARING THE GROUND—Before planting fruit trees the soil (except new ground), should be made mellow by repeated plowing, and where the soil is densely packed, a subsoil plow should be used and the ground stirred up from twelve to fifteen inches deep. If this is neglected the roots are soon surrounded by an almost impenetrable wall and cannot be expected to live many years. Whenever this system has been practiced, healthy and vigorous trees and fine fruit have been the result.

2. RECEIVING AND CARING FOR TREES—Trees are frequently ruined through the lack of care or bad management after they fall into the hands of the purchaser. When trees are received the roots should be covered with a blanket, sack or straw until they reach their destination. The bundle should then be opened and the trees separated from the moss in which they are packed. If the roots have become dry from long exposure, straw should be spread upon the ground, the trees laid upon it, then covered entirely (roots and tops) with straw and the whole well watered. If holes are not yet dug or the ground too wet to plant when the trees are received, dig a trench and lay the trees in a slanting position, so that you can cover up the roots and two-thirds of the body or stalk. In this position let them remain until the holes are dug or the ground is in a suitable condition to receive them.

3. DIGGING THE HOLES—If the soil for an orchard has been properly prepared by subsoiling and deep plowing, then the opening of the holes becomes a very simple matter, and really this is by far the easiest, cheapest and best plan; for if the soil is thoroughly pulverized to a depth of from twelve to fourteen inches, all that is necessary is to measure off the distance at which the trees shall stand from one to another and the order of planting. Where only a few trees are to be planted and the soil has not been subsoiled, or where the trees are to be planted in sod, then the holes ought to be at least four feet wide and eighteen to twenty inches deep, the subsoil thrown back and the hole filled up to proper depth with fine top soil, to receive the trees.

4. PRUNE BEFORE PLANTING—Both root and top should be pruned at time of planting and before the tree is set in the ground. First cut off the ends of the broken and bruised roots with a sharp knife, in a slanting direction on the under side. This will cause the wound to heal over readily; by throwing out plenty of fibrous roots at the end. Then cut back each branch or side limb to a bud not more than four to six inches from the body. Then cut back the leader or central limb so as to leave it about four or five inches above the highest side limb. When there are no side limbs the tree should be headed back to a height proper to form a top. None of the lower limbs should be cut off entirely, as it is best to form the heads as low as possible, so that the limbs and leaves will protect the trunk from the direct rays of the sun.

5. DEPTH TO PLANT—Immense numbers of trees are ruined by being planted too deep. Most kinds of fruit trees, except dwarf pears and plums on peach roots, should be planted not over two or three inches deeper than they grow in the nursery row. Dwarf pears and plums on peach roots should be set so that the joint where the body and roots are united will be about four inches below the top of the ground. By this means roots will be thrown out from the body that is covered and larger and longer-lived trees secured.

6. PLANTING—When ready to plant, take from the trench a few trees at a time; place the tree in position and arrange it to the proper depth by filling in or raking back the soil to or from where the tree will stand; then fill in the fine, mellow soil between and around the roots with the hand, arranging the roots in their natural position and packing the soil carefully around them. When roots are barely covered, sprinkle on water to moisten the soil and settle it among the roots; then fill to the top, press earth very firm around the tree with the foot as you fill in. Throw a bucket of water around each tree to settle ground, and scatter a little soil on to prevent baking.

7. MULCHING—Mulching prevents the moisture from escaping and maintains equitable temperature about the roots. The material used may be long manure, litter, straw, grass or hay, which should be spread on the surface around the tree for the space of four or five feet, and three to six inches deep. Bearing trees may be benefited by mulching heavily in winter, which will tend to prevent an early development of fruit buds and assist them to escape the effect of late frosts.

8. AFTER CULTURE—The trees should be kept free from grass and weeds, and no crops should be grown in the orchard while the trees are young, except such as can be cultivated with the plow or hoe. Cultivate well in the spring and summer.

9. AFTER PRUNING—The great majority of people do not take proper care of their trees after planting. This is a great mistake. If a tree or vine does not receive the right kind of care and enough of it when young, it will never attain a healthy old age. Very much has been said about pruning by various authors. Judging these and our own experience and observation, we would say: The best time to prune fruit trees, and about all kinds of trees and shrubs, is during May and June, May preferred; but be governed by the health and vigor of the tree. We do not advise severe pruning, as too much would injure the tree. Keep all superfluous forks and limbs cut off and the heads in proper shape to admit air and sunshine as long as the tree lives. Currants and Gooseberries should be trimmed late in the fall or early in the spring, before commencing to grow; Grape vines late in November or any time during the winter up to March 1st; after this trimming is apt to excite bleeding or flowing of sap from the wounds. If desirous of getting rubbish removed from the orchard during the winter, cut limbs off eight to ten inches from the body and cut balance off during May or June following.

10. STANDARD APPLE TREES—May be planted 30 to 40 feet apart. We advise planting the rows 40 feet each way, using one in the diamond as a filler. When the trees attain age and begin to crowd, cut out the filler. Those left will be in better condition and the others will have borne six or eight crops of fruit. Low heads are preferred, so as to protect the trunk from direct rays of the sun. Cultivate as directed and do not neglect to mulch them, especially young trees.

11. CRAB APPLES—Should be planted 25 feet apart. They are very hardy and bear young and abundantly. The fruit is highly valuable for preserves and jelly and makes finest cider known. Plant and cultivate same as an apple.

12. STANDARD PEARS—Should be planted 15 to 20 feet apart. They are grown on stocks imported from France and will grow on almost any soil, provided the subsoil is not too wet; whenever this is the case, the ground should be thoroughly underdrained. The best results are obtained from pears on a clay slope where the soil is poor.

13. STANDARD CHERRIES—Should be planted 15 to 20 feet apart. The soil best adapted to the Cherry is a light loam on a gravelly or sandy subsoil, though it will do well in almost any situation not too wet. To insure a good growth, Cherries should be well cut back for several successive seasons. Plant as directed and mulch well in the spring.

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14. PLUMS—Should be planted 15 to 20 feet apart, in clusters, as so planting assures more complete fertilization of the blossoms, thereby giving the fullest returns of the most delicious fruit. Plums should have rich soil, which should be kept well cultivated.

15. PEACHES—Should be planted 16 to 18 feet apart. To secure healthy, vigorous and fruitful trees, and fine fruit, the following points must be well attended to: 1. Keep the ground clean and mellow. 2. Keep the heads low—the trunks should not exceed 3 feet in height. 3. Give them an occasional dressing with wood ashes. 4. Prune every spring, shortening the shoots of the previous year's growth; this keeps the head round, full and well furnished with bearing wood. Cut weak shoots back about one-half and strong ones one-third; but see that there is left a sufficient supply of fruit buds. Sickly and superfluous shoots should be cut out clean. The fruit is borne on wood of last year's growth, and hence the necessity of keeping up a good supply of vigorous annual shoots all over the tree. Salt is an excellent fertilizer for peach trees; soap suds is also good. Young trees should be well mulched every spring, or kept well cultivated until about the middle of July each year. Would advise planting a good windbreak on south side of orchard.

16. APRICOTS AND NECTARINES—Should be planted 16 to 18 feet apart, and need the same management, culture and training as the peach.

17. CURRANTS AND GOOSEBERRIES—Should be planted in the garden 4 feet apart; sawdust and tanbarks should be used as a mulch. The currant flourishes in almost any kind of soil, but to have the fruit in perfection plant in rich, deep soil, and give good annual pruning and cultivation. When plants are grown as stools or bushes, the older and feebler canes should be cut out and the stem and root kept free from suckers.

18. RASPBERRIES—Should be planted 4 feet apart each way or rows 5 feet apart, and 3 feet apart in row, in deep soil, one that will retain moisture well in drought. In training, allow only a few canes to grow from each plant, cutting away all suckers to throw the strength into the stalk for bearing; all old canes should be removed immediately after the fruit is all picked.

19. BLACKBERRIES—Require the same kind of soil and treatment as Raspberries, except that they should be planted in rows 8 feet wide and 4 feet apart in the row. A neat and improved method of pruning will make the plants self-sustaining bushes, viz.: as soon as the plants are about 4 feet high, clip off the points of the growing cane and repeat the operation several times, until they assume the form of a bush. If not pruned in this manner they require to be tied to a stake or wire trellis. Mulching is of great advantage to both Raspberries and Blackberries.

20. GRAPES—If planted for fastening to trellis or arbor, should be 8 feet apart; if tied to stakes, 6 feet apart. The holes should be dug not less than 4 feet wide and 2 feet deep. Burying bones under the roots makes the vines more prolific and fruit of better quality. The bones should be in the bottom of the hole and covered with fine soil; then pour on a little water to settle dirt amongst the bones; then fill up with mellow soil to within 5 or 6 inches of the top; cut off the bruised and broken roots; straighten the roots to their natural position and cover them with fine mellow soil, about 2 inches, packing it carefully with the hand; then sprinkle on sufficient water to moisten the roots, fill up the hole and press dirt very firm as you fill in. A stake 6 or 7 feet high should be driven near the root of the vine at time of setting. The first year train one shoot only up to stake; pinch off all the others and also all the lateral or side shoots that appear during the first season; cut vine down to within 3 or 4 buds of the ground. The following season train up two shoots in the same manner.

21. STRAWBERRIES—Prepare the ground as for other crops; if not already rich, make it so by manuring. Mark out rows the desired width and set plants 12 to 17 inches in rows; if set 12 inches in rows 4 feet apart, an acre will require 10,890 plants—same as if 16 inches in rows 3 feet apart. Keep in rows and cultivate. Plant new bed every 2 or 3 years. In the early winter, when the ground is frozen, cover the whole with long straw, which should be partially removed from the row in the spring, but enough allowed to remain on the ground as mulch to keep berries clean the following summer. When plants are moved in the fall, they should be left until September. If taken up too early the plants are not as likely to live, as the roots are soft and spongy and will not bear exposure so well as after they have become matured and ripened.

22. WINTERING TREES WHEN PROCURED IN THE FALL—Procuring trees in the autumn for early spring planting is recommended, when the purchaser is not prepared to plant in the fall or prefers spring setting, or where winters are too severe to set out young trees and plants in the fall. The greatest advantages derived from doing so are that when the roots have been cut or pruned, it will be found upon taking them up in the spring, that a callus has been formed, ready for producing of new rootlets, and the trees being planted without much exposure, as soon as the frost is out of the ground, will become thoroughly established the first season, and should make twice the growth of late-planted trees, and the labor of planting is done before the rush of spring work sets in. To insure success select a dry spot of ground where water will not stand during winter and no grass or litter that will invite mice. Dig a trench from 3 to 4 feet wide, according to the amount of trees to be heeled in, and deep enough to admit one layer of roots and sloping enough to let the trees lie at an angle of 30 degrees, throwing the earth on the back part of the trenches, so as to make a more perfect slope on which to place the trees. Put in one layer of trees, placing the roots as close together as can conveniently be done; cover them with well-pulverized moist soil, well up on the bodies, and see that it is carefully worked in about the roots as if they were being planted; be sure that the soil is well thrown up around the bodies so that the water will run off and away from the trees—the dirt thus thrown up will also be a protection against mice.

Peach trees and Apricot trees should be mounded up every winter and allowed to remain a little later in the spring to insure full crops and protect them from late frosts.

A TABLE SHOWING THE NUMBER OF TREES OR PLANTS TO THE ACRE

Distance	No. of trees	Distance	No. of trees
1 foot apart each way	43,560	13 feet apart each way	257
2 feet apart each way	10,890	14 feet apart each way	222
3 feet apart each way	4,840	15 feet apart each way	193
4 feet apart each way	2,702	16 feet apart each way	170
5 feet apart each way	1,742	17 feet apart each way	150
6 feet apart each way	1,210	18 feet apart each way	134
7 feet apart each way	888	19 feet apart each way	120
8 feet apart each way	680	20 feet apart each way	108
9 feet apart each way	537	25 feet apart each way	69
10 feet apart each way	434	30 feet apart each way	48
11 feet apart each way	360	35 feet apart each way	35
12 feet apart each way	302	40 feet apart each way	28

RULE—Multiply the distance in feet between the rows by the distance the plants are apart in the rows and the product will be the number of square feet for each plant or hill, which, divided into the number of feet in an acre (43,560), will give the number of plants or trees to the acre.

SUITABLE DISTANCES FOR PLANTING

Apples, Standard.....	30 to 40 feet	Grapes.....	8 to 10 feet
Apples, Dwarf.....	8 to 10 feet	Currants.....	3 to 4 feet
Pears, Standard.....	18 to 20 feet	Gooseberries.....	3 to 4 feet
Pears, Dwarf.....	10 feet	Raspberries, Red.....	3 to 4 feet
Peaches.....	16 to 18 feet	Raspberries, Black.....	4 to 5 feet
Nectarines and Apricots.....	16 to 18 feet	Blackberries.....	5 to 7 feet
Cherries, Sweet.....	18 to 20 feet	Strawberries, in rows.....	1 by 3½ feet
Cherries, Sour.....	15 to 18 feet	Strawberries, in beds.....	1½ by 1½ feet
Plums.....	16 to 20 feet	Asparagus, in beds.....	1 by 1½ feet
Quinces.....	10 to 12 feet	Asparagus, in field.....	1 by 3 feet

Insects and Fungus Enemies of Fruit Trees and Plants

Only a few years ago little or nothing was known about fungus diseases, and almost nothing about the insects that trouble the fruit grower. But we know now the life history of all the common insects, as well as the fungus diseases, and know how to combat them at each stage of their life. It is only necessary to follow directions and be prompt and thorough, to insure success. A man will spend weeks cultivating his corn field, that will barely yield a crop to cover the labor, and begrudge a week's time to his fruit, that will yield him returns running into hundreds of dollars in profit per acre. We give below some general directions for spraying and caring for fruit that, if followed, will insure success.

Insects—There are some insects that escape our attention entirely, unless we look closely. Among these are the gnats, mites, scale-lice and the ordinary plant-lice. These are all insects that live by sucking the sap of the plant for food, and have to be combated with some mixture that dries on them, stopping up their breathing pores, which are arranged along their sides, or else by their caustic action eats away their tissues and destroys them. They have a great many natural enemies. Among them are the Ichneumon Flies—a fly looking much like a tiny wasp, and the Lady Bug. The insects that eat the leaves for food, such as the Potato Bug, the Apple Tree Tent-Caterpillar, etc., are killed by poisoning their food, and some form of arsenic has been found best for this purpose.

Fungus—Fungus is a plant—a parasite plant—living by throwing its roots in the tissues of the plant on which it lives, and appropriating its sap. It grows very rapidly when once started, and, as it is beneath the skin of the leaf or bark during the greater part of its life, if once started it is hard to stop, so that to be successfully combated work must be begun before any signs of the fungus appear. Usually fungus shows itself conspicuously only when it has gone to seed. Its seeds are called spores, and are transmitted from plant to plant by the wind. To the naked eye they appear like grains of very fine dust.

Formulas. Note—Wherever lime is called for in the following mixtures, it is to be weighed before slaking, then slaked and the creamy white wash, after straining to remove lumps, added to the solution.

ARSENITE OF LEAD

Lead Arsenite.....	1 pound
Water.....	150 gallons

BORDEAUX MIXTURE

(Standard formula)

Copper sulphate (Blue Vitriol).....	4 pounds
Lime (fresh).....	4 pounds
Water.....	50 gallons

Use about half of the water to dissolve the copper sulphate. Do this by suspending the crystals near the surface in a bag of coarse material. Put the lime in another vessel, and add water enough to thoroughly slake. Then add the remainder of the 50 gallons (about 25 will have been used for the copper sulphate, 1 or 2 for slaking the lime; use the remainder—23 or 24 gallons—for diluting lime).

Have a large vessel capable of holding 50 gallons and into this pour at the same time, the lime solution and the copper sulphate solution. The spray tank or barrel may be used for this purpose.

LIME-SULPHUR

The lime-sulphur solution seems destined to take the place of the Bordeaux mixture and many other copper sprays that have been in use a long time.

(For the best information about Lime-Sulphur send for Penn. Expt. Sta. Bulletin 92, July, 1909; or their latest bulletin on the subject.)

Lime, Fresh.....	15-20 pounds
Sulphur, flowers.....	15 pounds
Water.....	50 gallons

Place lime in an iron kettle over fire and slake with about 8 to 10 gallons of water. Add the sulphur and salt, then thoroughly boil the mixture for from forty to sixty minutes and stir constantly. Do not add any more water than is needed to keep the mixture from sticking and burning. Strain the mixture and add enough hot water to make 50 gallons.

TOBACCO SOLUTIONS

These can be prepared by boiling tobacco stems in water, two gallons to each pound of stems. Good for sucking insects.

Commercial solutions can be obtained. Use according to directions accompanying them.

Common Fungus Diseases

Apple and Pear Blight. Follow directions in Spraying Calendar, and in addition, cut off and burn all the affected parts as soon as noticed.

Apple Scab. Follow Spraying Calendar.

Grape Rot. Follow Spraying Calendar. Manila paper bags, securely pinned over the bunches, early in the season, are a preventive of the rot, also a protection against birds, wasps and other insects.

Powdery Mildew on Grapes. Follow Spraying Calendar, and dust the vines with powdered sulphur two or three times during the season.

Black-Knot of Plum and Cherry. Spray with Formula 3, and cut off all knots, cutting back into good wood, and burn.

Insects.—Apple-Tree Borer. The round-headed apple-tree borer (*Saperda Candida*) is a larva hatched from the egg of a brownish beetle, with two longitudinal white stripes along its back, which deposits its eggs late in June or July near the surface of the ground, where the bark is tender. As soon as hatched, the grub gnaws its way into the inner bark or sapwood, and continues to girdle and perforate the trunk during three summers, coming out of the tree at the end of three years in the beetle form. There are a number of remedies for this pest. (1) Examine the tree, and cut the borers out with the point of a knife, or kill them by thrusting a flexible wire as far as possible into the holes. The place where the larva enters can usually be detected by the sawdust-like castings that are pushed out. (2) To prevent the parent beetle from laying eggs, apply to trunk of tree, the last of April or early in May, and again a month later, a solution made by mixing 1 quart of soft soap with 2 gallons of water heated to boiling, and then add a pint of crude carbolic acid. Apply with a scrub-brush or cloth.

Flat-Headed Apple-Tree Borer (*Chrysobothris femorata*). The adult is a beetle about half an inch long (belonging to the Snapping Beetle family), and is very dark green above, with bronze reflections, especially in the furrows of the wing covers. It appears in June and July, and lays its eggs on the trunk and limbs of apple, peach, oak and other trees. The larva first bores into the bark and sapwood, and later into the solid wood. The larva matures in one year. Rub the branches and trunk with soap during June and July, or place a piece of soap in the crotch of the tree, so that the rains will dissolve it and wash it down over the trunk.

Peach Borer (*Sannina exitiosa*). These grubs hatch from eggs deposited (usually during May, but also at different times until last of September) by a slender, dark blue 4-winged moth. They become small white borers, penetrating and devouring the sapwood, emerging again the next spring in the winged form, and depositing eggs for another generation. The remedies are: (1) Cut out the borers, as recommended under Apple-Tree Borers. (2) Earth up (about 1 foot high) around the trunks of the trees in early spring, and level down in October, and when leveling down, if any bugs have entered, trace and kill them. (3) If you don't earth up, apply the solution recommended for painting the trunks of apple trees for borers. It is now becoming the custom to paint the crown of the tree with gas tar. This should be done in the spring.

All borers that infest nut-trees, shade-trees and grape-vines should be hunted out and killed.

The Canker Worm (*Paleacrita vernata* and *Alsophila pometaria*). The sluggish, wingless female moth rises out of the ground very early in the spring, and slowly ascends the trunk of the tree, laying eggs in clusters on the bark, to which they are secured by a grayish varnish. These usually hatch about the time the young leaves begin to grow, when the little worms begin at once to feed on the foliage. The larva is a "measuring worm" or "loop worm" of a pale brownish color, marked with darker brown and yellow. Encircle the trunk of the tree with bands of canvas or heavy paper 4 or 5 inches wide, which have been thickly smeared with tar, thus trapping the female moth.

Grape Flea Beetle (*Haltica chalybea*). So called because their thighs are very large, and fitted for jumping. The beetle is about one-sixth of an inch in length, and of a dark, steel-blue color. It eats the buds in the early spring, and later gnaws holes in the leaves. In May and June the sluggish larvae, brown in color, may also be found feeding on the upper surface of the leaves.

The Grape Leaf-Hopper (*Erythroneura vitis*). Pass between the rows at night with a torch, shaking the vines to start the insects. They will fly to the light and be destroyed.

Plant Lice. Spray with kerosene emulsion or tobacco solutions.

Apple Worm or Codling Moth (*Carpocapsa pomonella*). The parent moth of this insect deposits its eggs in spring in the blossom end of the young apple, before the latter has turned down on its stem. From this egg there hatches a small worm that eats its way towards the core, feeding and increasing in size as the apple develops, causing the fruit to drop prematurely. Apply remedy for codling moth just after the blossoms have fallen, and before the young apple has turned down on the stem, and in case there is a washing rain afterward, repeat the application. Apply by means of a force-pump and spray-nozzle, throwing the liquid above the tree, so that it will settle in a fine mist.

Curculio (*Conotrachelus nenuphar*) a great enemy of the plum, apricot and cherry. Jar the trees, and catch the insects upon sheets and burn or likewise destroy them. Another remedy is to spray the plum tree soon after blossoms fall with arsenite of lead $1\frac{1}{2}$ pounds to 50 gallons of water, repeating the application once or twice at intervals of ten days.

San Jose Scale—This Asiatic insect of the bark louse family caused damage in California for years previous to its introduction into eastern United States. It was first found east of the Rocky Mountains in 1839. This is a typical sucking insect which draws its nourishment from plants by means of the mouth parts that pierce the inner tissues. Over the insect is a waxy scale covering, circular in form. Slightly infested bark shows, in winter and spring, minute dark cones about the size of pin heads, often accompanied by a reddish discoloration of the surrounding bark. When the bark is crowded with insects many dead ones of light color give an ashy appearance and the inner bark may show much discoloration. In June young come forth and crawl about, but shortly insert their mouth parts and become fixed in their life position. Several broods follow throughout the summer, the later ones setting upon the fruit and causing much spotting. Treatment is most successful while leaves are off and the temperature is above freezing. Lime-sulphur, prepared at home or the commercial product, is the standard remedy. Miscible oils are also effective when thoroughly applied, as is whale-oil soap at 2 pounds per gallon of water.

Oyster Shell Bark Louse and Scurfy Scale. These common scale insects are larger and lighter than the San Jose Scale. Both winter as eggs beneath the scale covering and issue about June 10 to 15. While young, they may be killed by any of the common strengths of contact sprays but, where lime-sulphur at winter strength is being regularly used, enough material will adhere to the bark to control the young of the above scales when they hatch.

SPRAY CALENDAR

Plant	Insects or Diseases	Remedy	First Application	Second Application	Third Application	Remarks
Apple	Blackspot Canker	Bordeaux, double strong	Immediately after leaves fall	Three weeks later		A fourth application will pay. If bitter rot is present, a fifth application should be made.
	Bud Moth	Lime-Sulphur	Just as buds are swelling	Arsenate of lead twice as buds open, once after petals fall		
	Codling Moth and Seab	Paris Green, 1 lb. to 100 gallons of water	Within one week after blossoms fall	Week or ten days	Two weeks later	
	Curculio. See plum	Arsenate of Lead	After blossoms fall	Repeat in ten days	10 days later	
	Flathead Borer	Dig out worms in fall and spring with knife. When the leaves are off the tree				
Apple	Green Aphid	Lime-Sulphur	When the leaves are off the tree			Kerosene emulsion is effective when insects appear. Repeat before the leaves curl if necessary. Cutting off twigs covered with eggs in winter usually suffices for young trees. In the spring before the San Jose scale cannot be destroyed in one treatment. If only a few trees of an orchard are effected, burn them off.
	San Jose Scale	Lime-Sulphur or soluble oils as recommended	Early in November			
	Twig Borer	Lime-Sulphur	When buds swell in Spring	Arsenate of lead in summer when the worms appear		
	Woolly Aphis, Oyster Shell and Scurfy Scale	Soluble oils as recommended. Kerosene emulsion, 1 part to 12 parts water	Use when young first hatch in early spring	Repeat in ten days		
	Black Aphid	Kerosene emulsion or whale-oil soap. Soluble oils as recommended	When insects appear and before they curl the leaves	Bordeaux when fruit has set		
Cherry	Brown Rot	Bordeaux	Just before blossoms open	After the blossoms fall		If Woolly Aphis is present on roots, dip stock in 1-15 solution of recommended prepared oil compound. Applied May to August, or remove the soil and treat with finely ground tobacco placed around base of tree; use 2 to 5 lbs. to a tree.
	Slug	Arsenate of lead. Paris road dust or ashes. When the insects appear	Green or dust with lime, 10 per cent			
	Aphis	Kerosene emulsion	Early before leaves roll			
	Mildew	Potassium sulphide, 1 oz. to 2 gallons water	Just as buds burst	Ten days later, Hellebore for worms; quassia and tobacco for Aphis. Repeat second time when necessary.		
	Mildew and Rot	Bordeaux or dilute Lime-Sulphur	When buds first swell	Repeat in ten days		
Peach	Leaf Curl and Rot	Lime-Sulphur	Just before the buds open	After blossoms fall		Watch the plants closely in spring and begin spraying as soon as worms are discovered. Other current pests removed by cutting out and burning infested stems.
	Mildew	Lime-Sulphur	Before buds burst	Repeat in ten days		
	Peach Tree Borer	Dig out worms in fall and spring with a knife.				
	Elister Mite	Sulphur-lime, 1 gal. to 10	During growing season whitewash base of trunk	Repeat in two weeks		
	Cottony Scale	Kerosene emulsion	When leaves are off tree			
Pear	Seab	Lime-Sulphur or Bordeaux with Arsenate of Lead	When insects become cottony (May)	Repeat 10 to 12 days later if necessary.		Fourth application is needed. Use arsenate of lead if flea beetles are present. Best to add arsenate of lead for any biting insects.
	Blight and Curculio	Arsenate of Lead, 1½ lb. to 50 gallons water	Just before the blossoms open	While the last blossoms are falling. Use a vermorel nozzle. Do not drench the trees.		
			After blossoms fall	Repeat in ten days		
			When buds begin to swell	10 days later recommended solution if Aphis is present		
				When leaves are opening. Cut out all rusted canes.		
Raspberry Blackberry and Dewberry	Fungus Diseases	Bordeaux or Lime-Sulphur or Soluble Oils recommended	When buds begin to swell	Two weeks later (when not in flower) repeat second		If scale insects are present, use lime-sulphur or recommended compound. Dilute the mixture to half the strength given in formula—100 gallons of water instead of 50.

*Same treatment for Peach.

†Same treatment for Plum.

‡Same treatment for Pear.

§Same treatment for Cherry.

